

EIGHTH GRADE EXAMINATIONS

BOXWELL - PATTERSON EXAMINATIONS

BEING

A COMPLETE LIST OF ALL QUESTIONS ISSUED BY
THE STATE COMMISSIONER OF SCHOOLS SINCE
THE PATTERSON LAW WENT INTO EFFECT.

Compiled for the Use of Teachers Who Are Preparing
Pupils for the Patterson Examinations or for
Admission to High School, and for
Pupils for Home Study.

COLUMBUS, OHIO
PUBLISHED BY THE OHIO TEACHER
1922

Boxwell-Patterson Examinations.

Prior to 1902 the county examiners prepared the questions used in examining pupils from the rural and village schools for the purpose of ascertaining, under what was then known as the Boxwell Law, the fitness of such pupils to enter high schools. Up to this time physical geography was required in such examinations, but the act of March 28, 1902, dropped physical geography from the list of required subjects for admission to high schools and required the State Commissioner of Common Schools to prepare the questions for each of the two examinations and send them to the clerk of the county board for use in the examinations in April and May. The following lists include every question that has been asked by the Commissioner since the law went into effect.

The questions are here given in groups, just as they were given in the examinations, and the dates of examinations are also noted. This is done in order that teachers using these lists may compare one with another, noting the trend or tendency from year to year.

To the 22 complete sets of questions prepared by the School Commissioner's office, the publisher of this pamphlet has added eleven sets of questions prepared and used by county examiners in 1900 and 1901, prior to the passage of the law requiring the School Commissioner to prepare the questions and send them to the examiners. These lists were selected at random over the State, but it will be observed that the examiners' questions, on the whole, are more difficult than those sent out from the Commissioner's office.

Any number of copies of this little book will be sent post-paid for 25 cents each, or at the rate of \$2.00 a dozen when ordered in quantities of twelve or more. Address

THE OHIO TEACHER, COLUMBUS, OHIO

Pupils' Examination—April 19, 1902.

(Under Act of March 28, 1902.)

ORTHOGRAPHY.

1. Make and name the ordinary punctuation marks. 2. Mark diacritically the following words: visual, calico, aisle, air, coordinate. 3. Give the force and meaning of the following affixes: con, anti, ly, ing and ad. 4. Spell the following words to be pronounced by the examiner: (1) business, (2) until, (3) bureau, (4) niece, (5) supersede, (6) separate, (7) isolate, (8) cemetery, (9) souvenir, (10) synopsis, (11) privilege, (12) deceive, (13) diphtheria, (14) neuralgia, (15) hygiene, (16) tomato, (17) sycamore, (18) Constantinople, (19) Marseilles, (20) Cincinnati. 5. Select eight of the above words and give their definition.

READING.

Oral reading from standard authors to be conducted by the examiners.

WRITING.

1. The general character of the manuscripts will be used in part in determining the grade in this branch. 2. Copy the following quotation in your best handwriting:

Sunset and evening star

And one clear call for me;

And may there be no moaning of the bar

When I put out to sea.

But such a tide as moving seems asleep,

Too full for sound and foam,

When that which drew from out the boundless deep,

Turns again home.

—Tennyson.

ARITHMETIC.

1. Define factor, ratio, commission, least common multiple, interest. 2. How do you find the cost price when the selling price and rate of gain are given? How do you find the present worth of a debt? 3. I sold an article for \$17.50

and lost $12\frac{1}{2}$ per cent.; what per cent. would I have gained or lost had I sold it for \$15.00?

$$4. \quad \frac{\frac{1}{2} \text{ of } \frac{5}{6}}{\frac{2}{3}} \div \frac{\frac{3}{4} \times \frac{5}{6}}{2} = ?$$

5. I gave my agent \$162.50 with which to buy corn at $62\frac{1}{2}$ cents a bushel, after deducting his commission of 4 per cent. How many bushels did he buy? 6. Express in figures: one hundred and seven thousand two hundred and six and eighteen ten-thousandths; one hundred and seven thousand two hundred and six ten-millionths. Express in words: 298.015; 500.01025; 1256.081. 7. How many bushels of wheat can be put in a bin 8 feet square and 9 feet high? 8. What are the proceeds of a note of \$142.00 dated August 15, 1901, and payable November 4, 1901, discounted at 10 per cent.? 9. Find the area in acres of a piece of land .5 mile long and .3 mile broad. 10. I owned $\frac{5}{8}$ of a farm and sold $\frac{2}{5}$ of my share to A, who then had 40 acres less than I had left. How many acres in the farm?

GRAMMAR AND COMPOSITION.

1. Write a sentence that will contain a noun in the objective case, a noun in apposition, a pronoun in the possessive case, and a descriptive adjective. 2. Write a synopsis of the verb *sing* in the third person, singular number, active and passive voice, indicative mood. 3. What is a direct object? An indirect object? A predicate object? Write sentences to illustrate each. 4. What are relative pronouns? Name them. To what does each refer for antecedent? 5. What are subordinate clauses? Causal clauses? Clauses of purpose? Write an example of each. 6. What are the parts of a letter? Illustrate by writing a letter to Mr. John Newton, 89 State St., Boston, Mass., telling him something of your school work this year. 7. Answer the following invitation: Mrs. James Logan requests the pleasure of Miss Adams's company at dinner on Wednesday, April thirteenth, at six o'clock. 239 Main Street. 8. Tell the case of the nouns and pronouns in the following

sentences: I asked John to bring me a drink of water. Washington, with his defeated army, was in the city of New York, just after the battle of Long Island. 9. Analyze or diagram the following: Captain Nathan Hale, a brilliant and handsome young man, came forward and said, "I will undertake it." His last words were, "I regret that I have but one life to lose for my country." 10. What are conditional clauses? Indirect questions? Write an example of each.

GEOGRAPHY.

(Select any eight questions.)

1. What is longitude? Through what grand divisions does the parallel of 30° north latitude pass? 30° south latitude? Through what grand division does the meridian of 30° east longitude pass? 30° west longitude? 2. Name five railroads in Ohio which run into Chicago. Name three great lines of railroad running from Chicago to the great West. 3. In which states are the largest forests now found? Where is the most coffee raised? The most tea? The most rice? 4. Locate: St. Louis, Minneapolis, Manila, Milan, Yellowstone Park. Name one fact in connection with each. 5. Draw an outline map of Ohio and locate in it three of the largest rivers and five of the largest cities. 6. Into which ocean do the large rivers of the world flow? Why? Name the mountain ranges running from Spain eastward through southern Europe and Asia. 7. Where would you go to see the following: Bunker Hill Monument? Garfield's Monument? Mammoth Cave? Tower of Pisa? Garden of the Gods? The Erie Canal? Lookout Mountain? Harvard College? Statue of Liberty? Falls of Minnehaha? 8. What is meant by "standard time"? What is climate? Soil? Rock? River system? 9. What crops are being harvested at this season of the year in Australia? How would you go from Columbus to Manila? 10. How do you account for the size of the following cities: Paris? New York? New Orleans? Minneapolis? Philadelphia?

**UNITED STATES HISTORY, INCLUDING CIVIL
GOVERNMENT.**

1. What was there in the life and deeds of the following that you think commendable? William Penn? John Smith? Roger Williams? U. S. Grant? 2. Why did the southern states claim the right to secede from the Union? Which states seceded? Name five important battles of the Civil War. 3. With what event in history is the name of each associated: Balboa? De Soto? Cyrus Field? Alexander Hamilton? Daniel Webster? 4. When was the Northwest territory set apart? Name the states made from it, giving their capitals. 5. Name the six provisions of Clay's Compromise of 1850. 6. What difficulties were experienced under "The Articles of Confederation"? 7. Name the chief powers of Congress. 8. What is meant by the Electoral College? What are its duties and how performed?

PHYSIOLOGY.

1. How are bones nourished? How is a broken bone repaired? 2. What office does the skin perform? The tendons? 3. Describe the alimentary canal. 4. Trace the blood from the right hand to the left hand. 5. Name three narcotics. What organ is first affected by narcotics? 6. What would you do for a fainting person? How would you stop bleeding from an artery? From a vein? 7. What is the object of respiration and what are the organs of respiration? What are some of the evils of mouth-breathing? 8. What can you state as to the habits of people living in different climates, in respect to diet? 9. What is the value of sugar as a food? Why is a mixed diet necessary? 10. Tell briefly what each of the following signifies: Myopia, efferent nerves, paralysis, insomnia, mucus membrane.

Pupils' Examination—May 10, 1902.

(Under Act of March 28, 1902.)

ORTHOGRAPHY.

1. What letters are always vowels? 2. Define each of the following words: Surveyor, century, kernel, currant,

glacier. 3. Mark the correct pronunciation of the following words: Literature, biography, island, donkey, 'scissors. 4. Give the meaning and illustrate the uses of the following: Hyphen, monosyllable, dissyllable, caret, apostrophe. 5. Spell the following words as pronounced by the examiner: (1) Immune, (2) accelerate, (3) statistics, (4) municipal, (5) secrecy, (6) emphasize, (7) democracy, (8) scythe, (9) saucer, (10) cuckoo, (11) courier, (12) tongue, (13) neighborhood, (14) Napoleon, (15) Ulysses, (16) Cicero, (17) Wisconsin, (18) Colorado, (19) Buffalo, (20) Chicago.

READING.

Oral reading from standard authors to be conducted by the examiners.

WRITING.

1. Copy the following quotation in your best handwriting, carefully noting all punctuation marks:

In the lap of sheltering seas
Rests the isle of Penikese,
But the lord of the domain
Comes not to his own again;
Where the eyes that follow fail,
On a vaster sea his sail
Drifts beyond our beck and hail.
Other lips within its bound
Shall the laws of life expound;
Other eyes from rock and shell
Read the world's old riddles well.

—From Whittier's "Prayer of Agassiz."

2. The manuscripts of applicants as returned in other branches will also be used by examiners in determining the grade in this branch.

ARITHMETIC.

NOTE.—Applicants will select any ten questions.

1. Make a receipted bill of the following items as purchased today from a grocery firm in some town in your own county: 2 quarts of beans at 10 cents per quart; one-half gallon of vinegar at 20 cents per gallon; a dollar's worth granulated sugar; 3 lb. crackers, 25 cents; $2\frac{1}{2}$ lb.

cheese, at 18 cents per lb.; small sack flour, 65 cents. 2. Write in proper form a note for \$1,000 dated today, running for two years at 7 per cent., simple interest, two indorsers. 3. A pile of wood is 100 feet long, 10 feet high and 8 feet wide. How many cords does it contain? 4. A fence was supposed to be 20 rods long, but the chain with which it was measured was afterwards found to be 50 feet $3\frac{1}{2}$ inches long, instead of 50 feet. What is the true length of the fence in rods? 5. How much will it cost to carpet a room 21 feet by 14 feet, with Brussels carpet 27 inches wide, at \$1.20 per yard, the carpet to be laid lengthwise of the room, 3 inches being lost in matching each strip. 6. A boy bought a knife for 50 cents, and sold it for 20 cents. He then bought one for 20 cents and sold it for 50 cents. What per cent. did he lose on the first transaction? What per cent. did he gain on the second transaction? 7. A note of \$240, dated March 4, 1896, with interest payable annually at 7 per cent., was paid September 4, 1901. A payment of \$100 was made on the note on June 4, 1897. Find the amount necessary to settle in full on September 4, 1901. 8. Reduce 4 months 19 days to the decimal of a year. 9. A circular park is 60 rods in diameter; how many acres does it contain? 10. Extract the cube root of 24061.04, giving all the work. 11. Write in figures: Five hundred thousand and ninety-four and two thousand and one hundred-thousandths; also one-half of thirty-seven tenths.

12.

4

$$\frac{\frac{1}{6} \times \frac{1}{2}}{\frac{3}{4} - \frac{1}{5}} \div \frac{\frac{2}{5} + \frac{1}{3}}{\frac{1}{6} \text{ of } 2.7} = ?$$

Give answer in integers and decimals to hundredths.

GRAMMAR AND COMPOSITION.

1. Give the principal parts of the following verbs: Write, ride, lay, swim, love. 2. Write both singular and plural of each of the following words: House, beef, staff, mouse, man-servant, penny, box, potato, why, she. 3. Write sentences to illustrate each of the following, underscoring words called for: (a) A noun in the plural subject of a

transitive verb; (b) abstract noun used as object of a preposition; (c) relative pronoun; (d) copulative verb; (e) conjunctive adverb. 4. Analyze or diagram: "Italy, a country historic for art and song, occupies a large peninsula, bounded on the north by the Alps." 5. Give the grammatical use of all words in black type in the following: "Being provoked at my short-sightedness I resolved to return home." "The gift without the giver is bare." 6. How are sentences classified with respect to use? Illustrate your answer. How classified with respect to form? Illustrate your answer. 7. Define element, clause, number, comparison, grammar. 8. Give three rules for use of capital letters; also two rules of syntax. 9-10. Write with care a composition of not less than sixty words on either one of the following subjects: "Ohio," "Our Schoolhouse," "The Books I Like," "George Washington."

GEOGRAPHY.

NOTE.—Applicants will select any eight questions.

1. Name five counties of Ohio, giving their county seats.
2. Bound Pennsylvania, naming and locating its capital.
3. Name the five great lakes. Tell something of their size, depth, and commercial importance.
4. Name two very important rivers to be found in each of the following: China, Africa, North Europe, South Africa, New England.
5. Tell something of the Suez canal. What nation controls it? What waters does it connect? Why important?
6. Starting at the north name, in order, all the countries bordering upon the Mediterranean Sea.
7. Recount some of the troubles in South Africa. What nations or countries are involved? Who are some of the leading men?
8. What and where are the following: Luzon, Pike's Peak, Kilauea, the Everglades, Put-in-Bay, Fingal's Cave, Yosemite, the Hague, Westminster Abbey, Buenos Ayres?
9. Give the form of government and the title of the ruler in each of the following countries: Switzerland, Russia, Holland, England, France, Japan, Brazil, Germany, China, Mexico.
10. What are some of the effects produced by mountains? What relation do high mountains have to depth of sea? What mountains are the "oldest" in Amer-

ica? 11. Define: Continent, barrier-reef, longitude, geography, delta.

UNITED STATES HISTORY, INCLUDING CIVIL GOVERNMENT.

NOTE.—Applicants will select any ten questions.

1. Where were the first permanent settlements made in the United States? Whence did the settlers come? Tell something of their hardships. 2. When was Ohio admitted into the Union? Who was President? What city was the first state capital of Ohio? 3. Name, in order, the first five Presidents of the United States. Name also the present and the four preceding Presidents. 4. What are some of the duties of the President of the United States. 5. Name the county and township officers of Ohio. 6. What are the various courts of Ohio? What are some of the duties of the Supreme Court of Ohio? 7. Give one fact concerning the following: Robert Fulton, Farragut, Commodore Perry, Israel Putnam, Salmon P. Chase, LaFayette, Henry Clay. 8. Of whom did the United States secure the following: Louisiana, California, Alaska, Porto Rico, the Philippines? 9. Tell, if you can, the meaning of these expressions: "Carpet baggers," "civil service reform," "balance of trade," "Mason and Dixon's line," "the Alabama claims." 10. Tell something of the civil war, the causes, the campaigns, leading generals on both sides, the results accomplished. 11. Give a brief account of the growth of slavery in the United States. 12. With what important event is each associated: Columbus, John Sherman, Patrick Henry, Miles Standish, Horace Mann?

PHYSIOLOGY.

NOTE.—Applicants will select any eight questions.

1. Name the cavities of the trunk. What are contained therein? 2. Name all the bones of the shoulder and arm. 3. Tell something of the nervous system. What are its offices? 4. Distinguish between organic and inorganic foods, and give examples of each. 5. What are the effects of alcohol upon digestion? How disturbed heart-action? What is alcohol? 6. What are flexor muscles? Extensor muscles? 7. What part of the body is blood? What are

its uses? What is the normal heart-beat per minute? 8. In case of apparent drowning, what are some of the simple directions to be followed? 9. Name the special senses. Describe the chief organ of hearing. 10. What is meant by each of the following: Spinal cord? Chyme? Pulse? Pylorus? Vertebra?

Pupils' Examination—April 18, 1903.

(Under Act of March 28, 1902.)

ORTHOGRAPHY.

1. When is the final e dropped? When is it retained? Give examples. 2. Mark diacritically the following words: Italian, jealous, velocity, carbuncle, casual. 3. What is a synonym? Give synonyms for the following words: Fatigue, pail, eminent, irregular, Pagan. 4. Spell the following words to be pronounced by the examiner: Medicine, circus, innocent, abridgment, digestible, correspondence, magazine, parasol, simplicity, encircle, kerosene, treacherous, cranium, suture, rheumatism, Marietta, Egypt, San Francisco, Panama, Louisiana. 4. Select five of the above words and give their definition.

READING.

Oral reading from standard authors to be conducted by the examiners.

WRITING.

1. The general character of the manuscripts will be used in part to determine the grade of the branch. 2. Copy the following quotation in your best handwriting:

Little green hunter in meadows of air.

Busy, blithe buzzer, 'mid odorous bowers,
Are you a bird, say, or something more rare,

Kin to the butterfly, flirting with flowers?
Kissing, caressing them, billing them, pressing them.

All day long, through the bright, balmy hours.

Bright little, light little, slight little hummer,

Lover of sunshine and lover of summer.

—School Education.

ARITHMETIC.

NOTE.—Applicants will select any eight questions.

1. Give a written analysis of the following: A can do a piece of work in 6 days, and B can do it in 7 days. In what time can both together do the work? 2. Give a written analysis of the following: Four men together owned 1976 hogs. A owned 278, and B owned 490. C owned as many less than B, as B had more than A. How many did D own? 3. Make a receipted bill for the following items: 3920 lb. of hay at 15 a ton; 706 bu. corn at 72 cents per bu.; 200 lb. mill feed at \$2 a hundred; 35 bu. oats at 45 cents; 2 tons of nut coal at \$3.25 per ton; load of straw at \$6.75. 4. A gentleman gave away 1-7 of the books of his library, lent 1-6 of the remainder, and afterwards sold 1-5 of what was left. He then found he had 420 books on hand. How many had he at first? 5. How many acres of land are there in a rectangular field 3-4 of a mile long and 1-3 of a mile broad? 6. How much will a note of \$400 amount to in 3 years and 4 months with interest at 6 per cent., payable annually? 7. How much and what per cent. of profit did a man make on goods for which he paid \$1300, having marked the goods at 30 per cent. above cost and sold them at 10 per cent. discount on marked price? 8. A man sold 50 horses at \$126 each. On one-half of them he made 20 per cent., and on the remainder he lost 10 per cent. What was his actual profit? 9. Extract the square root of 39636 true to two decimals. 10. What is the area of a circle whose radius is 90 inches?

GRAMMAR AND COMPOSITION.

1. Write the abbreviations of the following words: Kentucky, George, Theodore, Oklahoma, forenoon, doctor, credit, superintendent, February, November. 2. Write both the singular and the plural forms of the following words: Tomato, ashes, family, buoy, turkey, women, teeth, wolf, mandman, maid-servant. 3. Diagram or analyze the following: His hair is **crisp**, and black, and long; His face is like the tan; His brow is wet **with** honest sweat; He **earns** **what'er** he can. 4. Parse the words in black type in the foregoing quotation. 5. Define the following: Verb, sen-

tence, predicate, verse, syntax. Give all the principal parts of the verbs from which the following are taken: Indicate, fought, went, was, lie. 7. Write sentences to illustrate each of the following, underscoring words called for: (a) A sentence containing a clause; (b) a phrase modifying a noun; (c) a sentence whose verb is modified by a direct object and an adverb. 8. Change the adverbial phrases to adverbs in the following sentences: (a) The men fought with courage; (b) In a short time the moon will rise; (c) At this place my father is buried; (d) Steamboats were unknown at that time. 9. Upon the assumption that you will be obliged to leave school and go to work, write a newspaper advertisement for such a position as you would be able to fill, stating your qualifications. 10. Write with care a brief composition on one of the following topics: "The Celebration of Ohio Day," "Arbor Day," "William McKinley."

GEOGRAPHY.

NOTE.—Applicants will select any eight questions.

1. Name and locate ten lake ports on the Great Lakes. 2. Bound Illinois, giving capital. Tell something of its products. 3. Where are the White Mountains? the Blue? the Green? the Black? 4. Name and locate ten seas in and around Europe and Asia. 5. Tell something of the new Isthmian canal to be constructed by the United States. 6. What is a delta? Name four rivers having deltas. 7. What and where are the following: Mexico, Kilauea, Madrid, St. Helena, Argentine, Moscow, Rhine, Long Island, Formosa, Vancouver? 8. What state produces the most iron? the most salt? the most petroleum? the most rice? 9. Where are the rainless districts of North America? of Africa? 10. Tell something of the relation of rivers to the growth of cities and the spread of commerce. Illustrate your statements by well-known rivers.

UNITED STATES HISTORY, INCLUDING CIVIL GOVERNMENT.

NOTE.—Applicants may select any ten questions.

1. Write in accurate form the Preamble to the Constitution of the United States. 2. Name the three departments

of our government and define the functions of each. 3. State some of the chief duties of each of the following officers: The justice of the peace, the constable, the common pleas judge, the sheriff. 4. Name in order the Presidents of the United States. 5. Give an account of the first permanent settlement of Ohio. 6. Name six men who have been Governors of Ohio. Who is the present Governor? 7. What explorations were made by Hudson? by De Soto? by Drake? 8. State briefly the facts and conditions which justified the Declaration of Independence of the American Colonies. 9. What is meant by the Emancipation Proclamation? When and by whom was it issued? What was its effect? 10. What is meant by the expression, "underground railroad"? by "free trade and sailors' rights"? by "squatter sovereignty"? by "taxation without representation is tyranny"? by "cotton is king"? 11. Who was Aaron Burr? Harman Blennerhassett? Thomas Jefferson? Benedict Arnold? John Marshall? 12. Give one important fact concerning each of the following: James Otis, Patrick Henry, Henry W. Longfellow, Robert E. Lee, S. F. B. Morse, Daniel Webster, George Dewey.

PHYSIOLOGY.

NOTE.—Applicants will select any eight questions.

1. What is food? a proper drink? a stimulant? 2. Describe the structure and growth of a nail. 3. What is coagulation? How may it protect us? 4. Explain and define the following: Periosteum, diaphragm, sternum, patella, humerus. 5. Name three narcotic poisons. 6. What is a gland? Name the largest gland in the body. 7. Describe the stomach. 8. What kind of glasses should a near-sighted person wear? a far-sighted person? Explain. 9. Name the coats of the eye. 10. From what source is alcohol obtained?

Patterson Examination—May 9, 1903.

ORTHOGRAPHY.

1. Define the following terms: Diphthong, aspirate, syllable, orthoepy. 2. Give a list of four prefixes with their meanings; also a list of four suffixes with their meanings.

3. Give all of the most important diacritical marks. 4. Mark correctly the pronunciation of the following words: Business, casual, precedence, isthmus, discern, hygiene, encore, dog. 5. Spell the following words, as pronounced by the examiner: (1) Exceed, (2) sieve, (3) sickle, (4) villian, (5) separate, (6) tourist, (7) milliner, (8) chisel, (9) allege, (10) precede, (11) nickel, (12) bilious, (13) judgment, (14) believing, (15) parallel, (16) Niagara, (17) Tennessee, (18) Oklahoma, (19) Rhine, (20) Newfoundland.

READING.

(Examiners will elect between giving oral reading from standard authors and the following written test. At the request of some of the examiners the following has been prepared where a written test is desired.)

1. What are the uses of the punctuation marks? 2. What is meant by "quality of voice"? How produced? 3. What is emphasis? inflection? cadence? 4. What books have you read during the past year? Which is your favorite poem? Why? 5. Who wrote each of the following: Rip Van Winkle; Psalm of Life; Elegy in a Country Churchyard; Landing of the Pilgrims; Thanatopsis; Snow Bound; The Barefoot Boy; Ivanhoe?

WRITING.

1. The general character of the manuscripts will be used in part to determine the grade of this branch. 2. Copy with great care the following as representing your best handwriting:

"Our father's God, from out whose hand,
The centuries fall like grains of sand,
We meet today, united, free,
And loyal to our land and Thee,
To thank Thee for the era done,
And trust Thee for the opening one."—Whittier.

ARITHMETIC.

NOTE.—Applicants will select any eight questions.

1. Give a written analysis of the following: 38 men receive for 23 days' labor a certain sum of money. How many days should 48 men labor to receive the same sum?
2. Give a written analysis of the following: I spent 1-5 of

my money for board, $\frac{1}{3}$ of the remainder for books, and $\frac{1}{4}$ of what then remained for clothes, after which I had left \$30. How much had I at first? 3. Find the greatest common divisor of 1247, 2002, 2366, 7007, and 13013. 4. What per cent. of 50 cents is \$5.00? What per cent. of 2 bu. is 4 qts.? 5. How do you find the diameter of a circle when the area is given? 6. What per cent. do I make by buying apples at the rate of 3 for 5 cents and selling them at the rate of 2 for 5 cents? 7. A note of \$305.80 is given December 16, 1899, at 7 per cent. A payment of \$25.00 was made December 31, 1900. What was the amount due December 31, 1902? 8. Find the number of acres in a triangular field, the sides of which are 48, 54 and 60 rods, respectively. 9. Find the solid contents of a sphere, the diameter of which is 10 feet. 10. Selling on a commission of $2\frac{1}{4}$ per cent., what would my commission amount to on sales aggregating \$1506.76? 11. Extract the cube root of 9643927 true to one decimal. 12. Draw figures to represent each of the following: The rectangle, the isosceles triangle, the trapezoid, the cylinder, the frustum of a pyramid, the right prism.

GRAMMAR AND COMPOSITION.

NOTE.—Applicants will select any eight questions.

1. (a) Write a sentence containing a clause of time; (b) one containing a clause of place; (c) one containing a clause of purpose. 2. Write a sentence containing all of the following: An adjective clause, an adverbial clause, and a noun in the objective case. 3. Give the principal parts of the verbs lie, burst, do, give, bring, and go. 4. What is meant by a phrase? How many kinds are there? Give examples. 5. Give the case of each noun in the following sentences: (a) Jones, the lawyer, gave John, the newsboy, a dollar. (b) Tell William I wish George to come home. (c) I asked him the name of the man who was hurt, and what physician he wished. 6. Parse in full the words "I," "who," and "what," found in sentence (c) of question 5. 7. Analyze or diagram the following: "Under the terms of the contract the company is authorized to sell all copies at sixty per cent. discount." 8. Write a letter to some firm,

asking for a copy of a certain text book and enclosing the order for the payment of the same. Be sure that the heading, salutation, closing, superscription, spelling and capitalization are correct. 9. Write a ten-line statement of the benefits of the high school. 10. A gentleman wishes to build a summer cottage near a lake in the woods about ten miles from town. He advertises for a carpenter. Write the advertisement.

GEOGRAPHY.

NOTE.—Applicants will select any eight questions.

1. Bound Massachusetts, giving capital. 2. Beginning at the north, name the chief capes upon our Atlantic coast. 3. Trace the mountain highlands of Europe from west to east, naming the ranges of mountains. 4. Where is the great industrial plane of Europe? 5. What four rivers of England are of great commercial importance? 6. Where does England mainly obtain the necessary food supply? 7. Name ten leading products of New York State. 8. What is the best railroad route between New York and San Francisco? Which is the best way to ship grain and meat from Chicago to Europe? 9. Name three commercial centers; three centers for manufactories; three delta rivers; and three rivers, noted for water power. 10. Name six chief lake ports in North America and tell why important. 11. What is the latitude and longitude of Columbus? What city in Europe is in nearly the same latitude? 12. Draw a map of Ohio and locate three rivers, six cities, and two railroads.

UNITED STATES HISTORY, INCLUDING CIVIL GOVERNMENT.

NOTE.—Applicants will select any eight questions.

1. Give a list of the biographies and histories you have read or used for reference in becoming acquainted with this branch. 2. Give the names of ten very important American statesmen, living or deceased. 3. Give the names of ten great inventors, living or deceased. 4. What particular discoveries were made by Balboa? Magellan? Ponce de Leon? 5. What form of government had each of the following colonies prior to the Revolution: Virginia?

Pennsylvania? New York? Massachusetts? Georgia? 6. What is meant by each of the following: "X. Y. Z. Papers"? "Charter Oak"? "Grand Model"? 7. Draw a map of New York, New Jersey, and Pennsylvania, and locate Saratoga, Ticonderoga, Gettysburg, Valley Forge, Princeton, Germantown, and Brandywine. 8. Name three of the most important causes of the Revolutionary war; three of the most important battles; and three of the principal generals on either side. 9. When was the Constitutional Convention? When did the Constitution of the U. S. go into effect? 10. With what historic event is each of the following connected: Jefferson? Hamilton? Stuyvesant? Drake? Hobson? Perry? 11. What were the most important county officers, and explain in a brief sentence the duties of each.

PHYSIOLOGY.

NOTE.—Applicants may answer any eight questions.

1. Of what use are bones? How are bones classified? 2. Why is bathing important to health? What are the most desirable times for bathing? 3. Describe the stomach and its openings. 4. Trace the blood from the head to the feet. 5. Of what value is fat in food? Sugar? Where is starch found? 6. How may foods be classified? 7. What are some of the evils of mouth breathing? Describe the larynx. 8. What are the effects of alcohol on the nervous system? On the moral nature? 9. What are the organs of taste? 10. How are the differences of sound of the voice produced?

Pupils' Examination—April 16, 1903.

ORTHOGRAPHY.

1. What letters are vowels? Can you have a syllable which contains no vowel? 2. What is the force and meaning of the following affixes: Inter, intro, trans, acy, ence, ness? 3. When is the final e retained in verbs ending in ee or oe? 4. Mark correctly the pronunciation of the following words: Condemn, endorse, almanac, biography, cabinet. 5. Spell the following words as pronounced by the examiner: (1) Ecstasy, (2) imminent, (3) cinder, (4) irreparable, (5) supersede, (6) effervescence, (7) policy.

(8) bilious, (9) parallel, (10) autocrat, (11) populace, (12) albumen, (13) modern, (14) senior, (15) franchise, (16) chyme, (17) oxygen, (18) perceive, (19) persevere, (20) perspire.

WRITING.

NOTE.—Applicant will copy the following in his best handwriting, giving care to punctuation and capitals:

Build thee more stately mansions, O my soul,
As the swift seasons roll!
Leave thy low-vaulted past!
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length art free,
Leaving thine outgrown shell by life's unresting sea!

READING.

Examiner will have applicant read from standard authors.

GRAMMAR AND COMPOSITION.

NOTE.—Applicant will select any eight questions.

1. Name the parts of speech. 2. What is gender? How can you tell the masculine and feminine genders? 3. What is an adverb? Classify adverbs. 4. Write a synopsis of the verb strike in the first person plural of the indicative and subjunctive modes. 5. Give five rules of syntax with reference to nouns, pronouns and verbs. 6. Analyze or diagram the following: "The morals of a community are improved when there is a body of well educated people in it." 7. What is meant by a phrase? How many kinds are there? Give examples. 8. Write a letter to some firm, making an application for a position. 9. Parse the words in black type: **Who is that man standing** at the corner? The man **who walked a mile** was weary. 10. How is the passive voice formed? Give sentence containing a verb in active voice and then change sentence to passive construction. 11. Write an essay of fifty words on "The Advantage of a High School Education." 12. Give the gender of the following: Bride, monk, Jew, administratrix, duke.

GEOGRAPHY.

NOTE.—Applicants will select any eight questions.

1. Name the principal cities located in the Mississippi Valley. Which one is of importance at present? 2. Name five chief exports of the United States, and tell in what part each is produced. 3. What is a plateau? Name and locate three. 4. Name the chief nations of Europe and give capital of each. 5. State briefly the causes of change of season. 6. What is the general direction of mountain chains in the Western Hemisphere? In the Eastern? 7. Name the principal islands of the East Indies. 8. Bound New York, giving capital and chief mineral product. 9. What important canal is being constructed and what waters will it connect? 10. Locate: Port Arthur, Seoul, Vladivostok, and Harbin. 11. Describe the Rhine river. 12. What are the chief industries of Ohio? 13. Bound your county and name the county seat.

PHYSIOLOGY.

NOTE.—Applicants will select any eight questions.

1. Define physiology, hygiene, and anatomy. 2. What is a gland? Name the largest gland in the human body, and give its function. 3. Trace a drop of blood from the heart through the circulatory system. 4. What is meant by a system; an organ? 5. Describe a joint. Classify joints. 6. Classify muscles and state their uses. 7. Why does man need a variety of food? 8. Name the bones of the leg and foot. 9. What is the effect of a narcotic upon the brain; upon the heart? 10. Give a brief description of the eye. 11. Name the kinds of food. Explain the general plan of digestion. 12. Is alcohol assimilated?

UNITED STATES HISTORY, INCLUDING CIVIL GOVERNMENT.

NOTE.—Applicants will select any eight questions.

1. Name the thirteen original colonies. 2. What were the causes that led the nations of the Old World to make explorations and settlements in America? 3. What was the first permanent settlement? The first Spanish settlement? 4. What were the Navigation Acts? What were the Alien and Sedition Laws? 5. What were the causes of

the War of 1812? 6. When was the Reconstruction Period, and why so called? 7. Give the divisions of our government and the function or duty of each. 8. How are United States Senators elected? What are their qualifications? 9. How is the President elected? 10. What are the purposes of the Constitution as set forth in the preamble? 11. Who were the following: Robert Fulton, De Witt Clinton, Alexander Hamilton, Stephen A. Douglas, Cyrus McCormick? 12. Name and give dates and causes of the Inter-colonial wars.

ARITHMETIC.

NOTE.—Applicants will select any eight questions.

1. Find the amount on \$100 at 6% interest, payable annually, no interest having been paid for four years and six months.. 2. How many bushels will the smallest bin contain that can be emptied by taking out either 7, 10 or 30 bushels at a time? 3. A firm had $\frac{1}{4}$ its capital invested in goods, $\frac{2}{3}$ of the remainder in land, and the remaining \$1224 in cash. What was the firm's capital? 4. There is a lot whose dimensions are 24 feet, 60 feet, 48 feet and 72 feet. What will be the length of the longest possible boards that will exactly enclose it without cutting the boards? 5. A can do a piece of work in 8 days, B in 12. How long will it take both to do the work? 6. What must be asked for apples that cost \$3.00 per bbl., that I may reduce my asking price 10% and still gain 20%? 7. What will it cost to carpet a room 25 feet by 30 feet with carpet 30 inches wide at \$1.25 per yard? 8. What will it cost, at 25 cents per cubic yard, to dig a cistern 10 feet in diameter and 12 feet deep? 9. A and B form a partnership for one year. At beginning of the year A puts in \$1200, B \$1000; at the end of 6 months A put in \$100 more. The gain for the year was \$250. Find each one's share. 10. Which is the better investment—5% stock at 120, or 4% stock at 80? 11. Extract the square root of 54329781 to one decimal. 12. Make out a statement of seven items of goods purchased at a grocery.

Pupils' Examination—May 14, 1904.

ORTHOGRAPHY.

1. What is a vowel? 2. What is a consonant? Name them. 3. Make and name the chief diacritical marks. 4. Spell 20 words as pronounced by the examiner: (1) attendance, (2) baptize, (3) certificate, (4) damageable, (5) etymology, (6) fragile, (7) grotesque, (8) heinous, (9) irrigate, (10) judicial, (11) mucilage, (12) olfactory, (13) quarantine, (14) rheumatism, (15) seizure, (16) triennial, (17) vigorous, (18) weasel, (19) youthful, (20) zinc.

WRITING.

Copy the following quotation in your best handwriting: "The powers of man have not been exhausted. Nothing has been done by him that cannot be better done. There is no effort of science or art that may not be exceeded; no depth of philosophy that cannot be deeper sounded; no flight of imagination that may not be passed by strong and soaring wing."—R. W. Emerson.

READING.

The applicants will read from standard authors as directed by the examiner.

UNITED STATES HISTORY, INCLUDING CIVIL GOVERNMENT.

NOTE.—Applicants will select any eight questions.

1. Name the thirteen original colonies. 2. What were the causes that led the nations of the Old World to make explorations and settlements in America? 3. What was the first permanent settlement? The first Spanish settlement? 4. What were the Navigation Acts? What were the Alien and Sedition Laws? 5. What were the causes of the war of 1812? 6. When was the Reconstruction Period, and why so called? 7. Give the divisions of our government and the function or duty of each. 8. How are United States Senators elected? What are their qualifications? 9. How is the President elected? 10. What are the purposes of the Constitution as set forth in the preamble? 11. Who were the following: Robert Fulton, De Witt Clinton, Alexander Hamilton, Stephen A. Douglas, Cyrus McCor-

mick? 12. Name and give dates and causes of the Inter-colonial wars. (It will be noticed that this list is identical with the list submitted in April.)

GRAMMAR AND COMPOSITION.

NOTE.—Applicants will select any eight questions.

1. Define Grammar, Etymology, and Syntax. 2. What is a pronoun? Classify them. Give the relatives. 3. What are the properties or accidents of a verb? Define Voice.
4. Analyze or diagram the following:

"All things that love the sun are out of doors;
The sky rejoices in the morning's birth."

—Wordsworth.

5. What is meant by a clause? How many kinds? Give examples. 6. Write the possessive case, plural number, of tooth, deer, ox, mouse, proboscis, Knight Templar. 7. Write an essay of fifty words on "The Purpose and Advantages of the Patterson Examination." 8. Write the opposite gender of each of the following: maid, earl, host, hero, duke, prophet, nun. 9. Write a sentence containing an infinitive. 10. Write a synopsis of the verb compel in the third person, singular number, indicative mode, passive voice. 11. What is a preposition? Give a list of six. 12. Parse the words in capitals in the following sentence: The aged man WAS ASSISTED by AS many AS came.

PHYSIOLOGY.

NOTE.—Applicants will select any eight questions.

1. What is the value of the study of physiology? 2. Classify the bones of the body. 3. (a) Why are many muscles arranged in pairs? (b) Describe the structure of a muscle. 4. (a) Describe the structure of the skin. (b) State its various uses. 5. How does alcohol injure the stomach? 6. Name the various organs of digestion, and the digestive fluids secreted by each. 7. What are the divisions of the brain? What is the function of each part? 8. What is each of the following: serum, bile, saliva, gastric juice, chyme, fibrine, clavicle, femur? 9. Give a brief description of the ear. 10. Why is tobacco in all its forms more injurious for a boy than for a man? 11. By what gland is the pancreatic juice secreted? 12. Describe the

effects of intoxicating liquors upon (a) body, (b) mind, (d) character.

GEOGRAPHY.

NOTE.—Applicant will select any eight questions.

1. Why is it warmer in Ohio in May than in December?
2. What is a river system? A mountain system? A range? A water divide?
3. On what waters would a vessel sail in going from San Francisco to London, England?
4. What is longitude? Latitude? What are your latitude and longitude?
5. Describe the Mississippi river.
6. Name the principal islands of the West Indies.
7. What are the chief exports of Africa? Of Australia?
8. Compare Japan and Russia as to (a) size, (b) population, (c) civilization.
9. Tell what and where each of the following is: Moscow, Nile, Melbourne, Los Angeles, Glasgow, Rome, Key West.
10. Draw a map of Ohio.
11. Name our chief island possessions and locate them.
12. Give the chief cities of Asia.

UNITED STATES HISTORY, INCLUDING CIVIL GOVERNMENT.

NOTE.—Applicant will select any eight questions.

1. What battle was the turning point in the Revolutionary war? In the Civil war?
2. Contrast the early settlers of Massachusetts and Georgia.
3. Who were the Pilgrims, or Puritans?
4. Why are the following days set apart as holidays: May 30, July 4, December 25, and February 22?
5. What places have been capitals of the United States?
6. Give an account of Arnold's treason.
7. What Presidents of the United States have been assassinated? Who succeeded each?
8. How is a territory admitted into statehood?
9. (a) From whom did we make the Louisiana Purchase? (b) When? (c) Price paid? (d) What did it include? (e) Who was President of the United States at the time of the purchase? (f) How is the centennial of the Louisiana Purchase to be celebrated?
10. How does a bill become a law?
11. (a) How and where are the laws of Ohio made? (b) Of what does the United States Congress consist, and how are its members chosen?
12. (a) Name at least two qualifications made necessary by the Constitution that one may become President of the United States.

(b) What is treason against the United States? What kind of testimony is necessary to convict of treason?

ARITHMETIC.

NOTE.—Applicant will select any eight questions.

1. A wagon loaded with hay weighs 4500 lbs.; the wagon alone weighs 1000 lbs. How many tons of hay in the load?
2. A note of \$600 is dated March 4, 1902, bears interest at $6\frac{1}{4}\%$. What is the amount due today?
3. Reduce $(2\frac{1}{2} \times \frac{3}{5}) \div (\frac{5}{8} \times 3\frac{1}{5})$ to a decimal fraction.
4. If A can do a piece of work in 10 days, B in 5 days and C in 20 days, how many days will it take all three working together to do the work?
5. A boy on a bicycle in making a journey rides at a rate of 8 miles an hour. Two hours after he starts his sister follows at the rate of 5 miles an hour. When the boy has been on the road 5 hours, how far away is his sister?
6. A farmer raised 120 bushels of potatoes in one field and twice as many in another. After putting $\frac{1}{4}$ of his crop in the cellar and selling $\frac{1}{2}$ of the remainder, he distributed what he had left in the fields equally among 8 poor families. How many bushels did each family receive?
7. An agent received \$5100 with which to buy wheat at 80¢ per bushel after deducting his commission of 2%. How many bushels did he buy?
8. The minute hand of a clock is 6 inches long. Over what distance does the point move in 1 hour?
9. When it is 4 p. m. at San Francisco, longitude $122^{\circ} 26' 15''$ W., what time is it at St. Louis, longitude $99^{\circ} 15' 15''$ W.?
10. Extract the cube root of 57512456.
11. What will one gross of buttons, listed at \$1.00 per dozen, cost at 20 and 10% off the list?
12. What will it cost at 50¢ per cubic yard to excavate a cellar 6 feet deep and 12 feet square?

Pupils' Examination—April 15, 1905.

UNITED STATES HISTORY, INCLUDING CIVIL GOVERNMENT.

1. Relate two events in the life of Columbus that show his perseverance.
2. Where and for what purpose did Lord Baltimore found a colony in America?
3. What battle do you consider marked the turning point of the Revo-

lution? Give reasons. 4. What were the important events of the Hayes Administration? 5. Name six prominent generals of the Civil war and tell on which side each fought. 6. What Presidents has Ohio furnished? What battle-fields? 7. Name five important events connected with the history of slavery in the United States. 8. Name three classes of persons who have no legal right to vote. 9. State three purposes, given in the preamble, for which the Constitution of the United States was framed. 10. What is the name of the highest court of the United States? How are its judges chosen?

ORTHOGRAPHY.

1. Distinguish between orthography and prosody. 2. Define the term liquid as applied in orthography. Mention all the letters in this class. 3. Write three suffixes that denote negation. Give the meaning of the prefixes: pre, trans, and ex. 4. Mark correctly the pronunciation of the following words: (1) illustrate, (2) sacrifice, (3) Arkansas, (4) finance, (5) sacrilege. 5. Spell the following words, to be pronounced by the examiner: (1) culinary, (2) secede, (3) sensible, (4) achieve, (5) catarrh, (6) deplore, (7) assignee, (8) dropsy, (9) Milwaukee, (10) depths, (11) rogue, (12) pigeon, (13) ballad, (14) promissory, (15) gauge, (16) larynx, (17) Chesapeake, (18) reverse, (19) Appalachian, (20) cargoes.

WRITING.

Applicant will copy the following in his best handwriting, giving care to punctuation and capitals:

If I could put my words in song,
And tell what's there enjoyed,
All men would to my garden throng,
And leave the cities void.
In my plot no tulips blow—
Snow-loving pines and oaks instead;
And rank the savage maples grow
From spring's faint flush to autumn's red.
My garden is a forest ledge,
Which elder forests bound;
The banks slope down to the blue lake edge,
Then plunge to depths profound. —Emerson.

PHYSIOLOGY.

1. Distinguish between physiology and anatomy. 2. Name the bones of the arm and hand. 3. Give the composition of the blood. 4. Describe the pulmonary circulation. 5. For what purpose is lime required in the body? Fat? 6. What are the organs of respiration? How does the diaphragm aid in respiration? 7. Name the digestive fluids. 8. Of what is the saliva composed and what office does it perform? 9. Classify the teeth. Upon what class devolves the chief duty of masticating the food? 10. Why are stimulants dangerous? Illustrate by alcohol.

READING.

Examiners will conduct an oral examination in reading.

ARITHMETIC.

1. From 100 subtract the sum of .371 and .0065; multiply the remainder by .3, and divide the product by .000005. 2. Explain the relation between longitude and time. Distinguish between standard and local time. What is the difference in time between Eastern standard time and Pacific standard time? 3. The proceeds of a 90 day note discounted at a bank at 6% 17 days after date are \$274.17. Find the face of the note. 4. Define a composite number, power, reciprocal, meter, ratio. 5. A man bought goods at discounts of 20 and 30 from the list price, and sold at discounts of 10 and 4 from the list price. Find his per cent. of gain. 6. A square field contains 20 acres. Find the number of rods of fence required to enclose it. 7. What is the cost of flooring a room 18 feet 6 inches long and 12 feet 3 inches wide, at \$8.25 per 100 square feet? 8. Find the value of $8 \times 4 - 9 \times 2 + 43$, using the signs according to their true mathematical signification. 9. $\sqrt{.000961} = ?$ 10. What is the common denomination to which dry measure and liquid measure can be reduced? A cask that will contain 10 bushels of wheat will contain how many gallons of water?

GRAMMAR.

1. Name two offices of a noun that a clause may perform. 2. Give the syntax of the infinitives in the following words in capitals: (1) The paper, TO BE sure, was rather

frayed at the edges; (2) I shall endeavor TO RENDER it in modern parlance; (3) Shall I be left to DIE alone? (4) Books were written to give pleasure and TO BE ENJOYED. 3. Define case, and state how the case of a substantive is determined. 4. Write two sentences, one containing a clause in apposition with a noun, and one containing a noun in apposition with a clause. 5. State three different ways of comparing adverbs and illustrate each. 6. Analyze the following selection:

The NIOBE of Nations! there she stands,
CHILDLESS and crownless in her voiceless woe,
An empty URN in her withered hands,
WHOSE holy dust was scattered long AGO.

7. Name and classify the modifiers of NIOBE. 8. Name the principal and subordinate clauses in the selection and state the grammatical construction of each. 9. Parse the words in capitals. 10. Classify pronouns and use an example of each in sentences.

GEOGRAPHY.

1. What river is on the boundary between (a) Pennsylvania and New Jersey; (b) Vermont and New Hampshire; (c) Europe and Asia; (d) United States and Mexico; (e) Paraguay and Argentine Republic? 2. What effect is a great extent of seacoast likely to have upon the climate of a country? What effect upon the occupation of the people? 3. Mention two States in the United States that lead in the mining of coal; two in the mining of copper; one in the mining of salt. 4. Name the five States that bound Ohio. 5. Locate two important commercial centers upon the Gulf of Mexico; two upon the Ohio river; one upon Lake Superior. 6. Define (a) oasis, (b) fjord, (c) delta. 7. What physical conditions have contributed to the growth of Buffalo as a commercial center? 8. Under the protection of what world power is each of the following cities: (a) Gibraltar, (b) Manila, (c) Sitka, (d) Algiers, (e) Cayenne? 9. Describe the government of Canada. 10. What articles would you expect a ship loading at Cape Town to take in cargo?

Pupils' Examination—May 13, 1905.**ORTHOGRAPHY.**

1. Define consonant, syllable, accent. 2. How are words classified according to syllable? Give example of each class. 3. State the difference between derivative and compound words. Give two illustrations. 4. Give at least two rules that will aid in spelling. 5. Spell correctly the following words: Cincinnati, chimneys, analysis, infinitive, forty-four, furlough, separating, grammar, business, sieve, superseded, benefited, persuading, pursuing, zeros, lilies, promissory, rheumatism, preferred, miscellaneous. (Allow ten credits to each of the first four questions and three credits to each word in the fifth question.)

WRITING.

Applicant will use the following to present a sample of his penmanship: "We are born for a higher destiny than that of earth; there is a realm where the rainbow never fades, where the stars will be spread before us like islands that slumber on the ocean, and where the beings that pass before us like shadows will stay in our presence forever."

READING.

Examiners will conduct an oral examination in reading.

ARITHMETIC.

1. A ship is worth \$85,000. A man owns $\frac{7}{16}$ of it. If he sells $\frac{3}{5}$ of his share, what is the value of the part of his share which is left? 2. What will be the expense of plastering the ceiling and walls of a room 18 feet long, 15 feet wide, and 8 feet high, at 30¢ a square yard, allowing 150 square feet for doors, windows, etc.? 3. Multiply the decimal two hundred and one ten-thousandths by two and five thousandths, and divide the product by two millionths. 4. What sum of money will amount to \$859.75 in 4 years 6 months at 7% simple interest? 5. Three persons purchase a farm for \$2800. If A pays \$1200, B \$1000 and C \$600, how shall they divide the rent, which is \$224? 6. Define a compound number, prime factor, cancellation, cubic yard and square root. 7. Express decimally 3.5%. What per cent. of 1000 is 250? What per cent. of 250 is

1000? 8. A farm was sold for \$5950 at a loss of 15%. What selling price would have given a gain of 20%? 9. How do you find the area of a circle? The surface of a cube? 10. How far apart are the opposite corners of a square farm which contains 160 acres?

ENGLISH GRAMMAR.

1. What is grammar? Does the study of this subject affect the character of your speech? How? 2. What is a transitive verb? Write a sentence in which a transitive verb is used and tell why the verb is transitive. Write a sentence in which the verb is intransitive. 3. What is a conjugation? Conjugate the verb "write" in the present and past tenses in the indicative and infinitive moods. 4. Make a complete classification of nouns. 5. Name and define four properties of the noun. 6. How many and what are the genders ascribed to nouns? What is your opinion of the common gender? 7. Write three sentences, each containing a clause and each clause having a different use in the sentence. 8. Give the grammatical construction or relation of each clause. 9. Parse the nouns, pronouns and verbs in the following:

"Be noble, and the nobleness
That lies in other men,
Sleeping but never dead,
Will rise in majesty
To meet thine own."

10. Write the principal parts of five irregular verbs. Define case.

UNITED STATES HISTORY.

1. Who were the Puritans? The Pilgrims? The Huguenots? In what part of America did representatives of each class settle? 2. What were regarded as three of the objective points in the French and Indian war? 3. State fully the causes of the Civil war. 4. Name the departments of the President's Cabinet. 5. Give the time, cause and results of the Mexican war. 6. What territory has been acquired by the United States since 1890? 7. State the causes of our war with Spain and two important results. 8. During whose administration was the Lewis and

Clark expedition undertaken? 9. Name the first six and last four presidents of our country. 10. Name the two United States Senators from Ohio. For how long a term are they elected?

PHYSIOLOGY.

1. Define physiology. State the difference between physiology and anatomy. 2. Describe the structure of a bone. Name the classes of bones of the human body. 3. Describe the structure of muscles. Name five muscles of the body and locate each. 4. Name and locate the vital organs of the body. 5. Describe the heart, and state the function of each chamber of it. 6. Describe the blood, and show the changes that occur in the lungs and in the cells of muscular tissue. 7. Describe the digestive organs of the body. 8. Name the fluids that aid in the digestion. Which organ supplies each of these fluids? 9. Describe the structure of the skin, and give direction for the proper care of it. 10. In case of accident by which one is liable to bleed to death, how would you assist the injured one while waiting for a physician? How determine whether the blood is arterial or venous? State difference in course to be pursued in stopping blood from veins and from arteries.

GEOGRAPHY.

1. Define geography. 2. State five facts in regard to the earth which the study of geography has made clear to you. 3. What is longitude, and how is it measured? How many degrees of longitude may a place have? 4. What is latitude, and how is it measured? How many degrees of latitude may a place have? 5. Name two salt water lakes, one of which is located in America, and explain the cause of the presence of salt in these lakes. Name eight fresh water lakes in the United States. 6. Name the sections into which the United States is usually divided. In which of these sections do you live? 7. Name the States you would pass through in traveling on a meridian from Columbus to the Gulf of Mexico, and name and locate the capital of each. 8. Name and locate five rivers of Europe, and the chief city on each river. 6. Name five seas on the coast of Asia. Name and locate five mountain chains in

Asia. 10. Bound the county in which you live and name the county seat of each adjoining county.

Pupils' Examination—May 12, 1906.

GRAMMAR.

1. What is a preposition? How does it differ from a conjunction? 2. Give the passive infinitives of the verbs "to drink" and "to lay." 3. Write all of the singular and plural forms of the following words: index, sheep, analysis, news, penny, politics, gross, child, maid, brother. 4. What is an independent element? Write at least two sentences illustrating different independent constructions. 5 and 6. Write a suitable newspaper advertisement for a young man or woman wishing to obtain a position as stenographer. State qualifications, wages expected, etc. 7. Supply appropriate pronouns of the third person in each of the following sentences: (a) I can walk as rapidly as _____. (b) _____ do you think will be selected? (c) I cannot let you and _____ play together. (d) He is a man _____ I know is honest. (e) It was _____ who wanted you. 8. Rewrite the following sentences, improving the grammar and punctuation: (a) Uncle Toms Cabin is one of the world's most popular books. (b) Not one of the entire crew could write their own name. (c) We had hoped to have seen you before you left. (d) I saw many dead soldiers riding across the battlefield. (e) The clerk said I can only give you one yard off of this piece of cloth. 9. Write a complex sentence. A sentence with a compound subject. 10. Write a complex sentence and diagram or analyze the sentence you have written.

GEOGRAPHY.

1. Give the three general divisions of this subject and define two of them. 2. Compare Europe and North America with regard to highlands. 3. Name and define three of the natural divisions of land; two of water. 4. Locate the following islands and tell to what country each belongs: Corsica, Porto Rico, Madagascar, Jersey, Sicily. 5. Describe Cuba as to climate, government and products. 6. Give the route by water from Halifax to Chicago. 7. What

is a glacier? How are icebergs formed? 8. Name a river which empties into the Gulf of Mexico from each of the following States: Texas, Louisiana, Alabama; one which empties into the North sea from each of the following countries: England, Germany. 9. From what country does the United States make large importations of silk, rubber, linen, coffee, tea, wool, hides, wine, toys and sugar? 10. Locate the largest city of each continent.

ORTHOGRAPHY.

1. Write words illustrating the different sounds of the letter "a" and indicate each by the proper mark. 2. Write a word containing a diphthong; a word containing both primary and secondary accents; a compound word; the plural of monkey; a word which has the same form in both the singular and plural numbers. 3. Discriminate in meaning between the words in the following pairs: affect and effect; principal and principle; presence and presents; relic and relict; loose and lose. 4. Give a synonym of each of the following: immense (adj.), pale (adj.), mien (noun), efficient (adj.), and compel (verb). 5. Spell correctly each of the following words, to be pronounced by the examiner: abolish, complexion, dryly, idiom, routine, resource, roguish, append, epitaph, facial, bilious, Cincinnati, police, apparel, elegant, costume, censure, homicide, decease, caucus.

READING.

Examiners will conduct an oral examination in reading.

ARITHMETIC.

1. Multiply .0003 by .003 and explain the rule for pointing the product. 2. Make a receipted bill of the following: Anson Williams bought this day of Johnson Bros., Columbus, Ohio, 3 bbls. of flour, at \$3.75; 75 lbs. sugar, at 5¢; 10 lbs. coffee, at 35¢; 2 lbs. tea, at 60¢. 3. By selling flour at \$7.00 per bbl. $16\frac{2}{3}\%$ of the cost was gained. What did the flour cost? 4. A insured his house for two-thirds of its value at 3%. He paid \$24 premium. Find the value of the house. 5. Reduce to miles, rods, etc., 876400 in. 6. What

is the area of a circle whose circumference is 18 in.? 7. Find the amount of the following note at maturity:

Canton, O., Jan. 12, 1905.

On July 15, 1905, I promise to pay to the order
of the Sprague Correspondence School two hun-
dred fifty dollars (\$250), with interest at 6%, value
received. James Gay.

8. A cistern is 16 feet long, 12 feet wide and 9 feet deep. What is its capacity in barrels? How many ounces in Troy pound? How many sheets in a fathom? How many sheets in a quire? How many dozen in a gross? How many dollars in an eagle? 10. Simplify: $(9\frac{1}{2} \times 73.7) \div (4\frac{3}{4} \times 11.14 + \frac{3}{5} = ?$

PHYSIOLOGY.

1. Locate each of the following bones in the body: Sternum, patella, radius, frontal, femur. 2. Where is the heart located? What is its shape and about how large is it? 3. Where does the process of digestion begin? Where does it end? 4. What is the difference between venous and arterial blood? 5. Mention the organs of speech. 6. What are ligaments? Glands? 7. Of what are the teeth composed? 8. Mention two forms of exercise which you consider healthful, and tell why. 9. State three important lessons you have learned with reference to the effects of alcohol on the system. 10. Should the outside air be admitted to the room in which you sleep? Why, or why not?

UNITED STATES HISTORY.

1. Give a brief account of an important exploring expedition undertaken by Hudson; by De Soto. 2. Bound the United States at the time of the adoption of the Constitution. 3. State with regard to the Quakers (a) what colony they founded; (b) their relations with the Indians; (c) why they were persecuted. 4. Give the location and results of two important battles of the Revolution. 5. Mention as many important events as you can in the presidential administration of Washington's successor. 6. What did the abolitionists believe with regard to slavery? Give the names of two prominent abolitionists. 7. What was the principal provision of the Kansas-Nebraska Act? 8.

What Presidents has Ohio furnished? 9. Give the cause of the late Spanish-American war. 10. Why are the following names included in history: Robert Fulton, Eli Whitney, Harriet Beecher Stowe?

WRITING.

Copy the following selection, paying particular attention to neatness, punctuation and capitals:

Speak gently! 'tis a little thing
Dropped in the heart's deep well;
The good, the joy, which it may bring,
Eternity shall tell.

—G. W. Hangford.

Pupils' Examination—April 21, 1906.

PHYSIOLOGY.

1. Of what are the bones composed? Mention two food substances which help to nourish them. 2. Describe the skin. Account for the necessity of frequent bathing. 3. Mention the organs of respiration. 4. How would you stop a bleeding artery? 5. Mention three secretions that act upon the food in the process of digestion. 6. Locate the kidneys. What is the office of the liver? 7. Describe briefly the circulation of the blood. 8. What and where is each of the following: Retina, tympanum, humerus, olfactory nerves, lymph, triceps? 9. What are the vital organs? Give the effect of alcohol upon one of them. 10. Mention three cautions to be observed in the care of the eyes.

WRITING.

Copy the following selection, paying particular attention to neatness, punctuation and capitals:

Leaves have their time to fall,
And flowers to wither at the north wind's breath,
And stars to set; but all—
Thou hast all seasons for thine own, O Death!

—Mrs. Hemans.

READING.

Examiners will conduct an oral examination in reading.

GRAMMAR.

1. Define syntax and give a rule of syntax relating to each of the following: Appositives, pronouns, the verb "to be." 2. Give three rules for the use of the hyphen and illustrate each. 3. Change the following simple sentence into an equivalent complex sentence; into an equivalent compound sentence: Gusts of wind and a pouring rain compelled our party to seek shelter indoors. 4. Conjugate the verb "to sink" in the active, indicative mode, future perfect tense; the verb "to work" in the passive voice, subjunctive mode, past tense. 5. What is the distinguishing difference between a verb and a participle? 6-7. Write a letter renewing your subscription to a favorite magazine. State how much money you enclose, in what form you enclose it, etc. 8. Give the use of "shall" and "will" as future auxiliaries. Without knocking, he opened the door and entered so softly that I was not conscious of his presence until he said, "Were you not expecting me"? 9. Classify all the clauses in the above sentence and tell what word each modifies. 10. Parse the words in black type.

GEOGRAPHY.

1. Name the races of mankind and a people belonging to each race. 2. Define latitude and longitude; give the latitude and longitude of the North Pole. 3. How wide is the torrid zone? Trace the course of the equator either through South America or through Africa. 4. Define so as to distinguish: Sound, bay, gulf. Where is each of the following: Puget Sound, Gulf of Aden, Bay of Biscay? 5. Mention three large rivers of South America that empty into the Atlantic Ocean. Why are those which empty into the Pacific Ocean from the same country comparatively small? 6. Give the probable route and cargo of a vessel sailing from Constantinople to Bombay. 7. Mention a locality in Ohio where each of the following occurs: Oil wells; coal mines; vineyards; tobacco fields; potteries. 8. What does a thermometer tell? What does a barometer tell? 9. Bound California. Locate a lake, a desert, and a city in this state. 10. Name and locate three of the principal cities in Canada.

UNITED STATES HISTORY.

1. What territory, and under the flag of what nation, did each of the following explore in America: Ferdinand De Soto, Henry Hudson, Jacques Cartier? 2. Where and for what purpose did Lord Baltimore found a colony in America? James Oglethorpe? 3. What were the Alien and Sedition Laws? Tell why you think that they were just or unjust. 4. Tell what you can about the early settlement of Ohio. 5. Mention the first four Presidents of the United States and an important event that occurred in the administration of each of the last two mentioned. 6. Why was Burgoyne compelled to surrender? 7. Discuss the administration of Andrew Johnson. 8. Mention two important events in the administration of McKinley; of Roosevelt. 9. What steps are necessary for a foreigner to become a resident of the United States? 10. When and what were the services rendered to the United States by George Dewey, John Paul Jones, Oliver Hazard Perry?

ORTHOGRAPHY.

1. Distinguish between accent and emphasis. 2. Define aspirate, dissyllable, diphthong. 3. Give two rules to be observed in writing abbreviations. Write the abbreviations for each of the following: Junior, railroad, acre, Missouri, noon. 4. Write the following words correctly, dividing into syllables, and using mark of accent and diacritics: Allege, suffice, diamond, coerce, greasy, accede, kiln, said, cheese, loose. 5. Spell correctly the following words to be pronounced by the examiner: Millenium, academy, lettuce, gorgeous, fusion, abbreviate, pitiless, aghast, conceit, chapel, reprieve, abscess, calcium, precious, Hawaii, able-bodied, extol, pleasurable, solos, amethyst.

ARITHMETIC.

1. Define factor, power and reciprocal. 2. Analyze the following problem: A can do a piece of work in three days, and B can do it in four days. How long will it take them to do it working together? 3. A square field contains 10 acres. Find the cost of fencing it at 80 cents per rod. 4. An agent received \$3000 to buy flour, from which he was to deduct a commission of 2 per cent. Find the

amount invested in flour. 5. A grocer makes a profit of 20 per cent. by selling coffee at 25c.; what per cent. profit will he make by selling the same at 26c.? 6. What is the value of a pile of wood 80 ft. long, 5 ft. high, and 4 ft. wide at \$1.67 a cord? 7. How many acres in a rectangular field 402 rds. 1 yd. long and 121 yds. wide? 8. Find the cost of carpeting a room 18 ft. long and 15 ft. wide with carpet 27 in. wide at 75c. a yard, strips to run lengthwise. 9. Make and solve a problem to illustrate the method of finding the area of a triangle when the lengths of the three sides are given. 10. Find the principal which, at 6 per cent., will produce \$860 in 2 mo. 24 da.

Pupils' Examination—April 20, 1907.

(Under Act of March 28, 1902.)

UNITED STATES HISTORY.

1. Give the origin of the name Pennsylvania. What led Oglethorpe to found a colony in Georgia? 2. Why did George III. propose to tax the colonies? 3. Name two services that Benjamin Franklin performed for his country. 4. When was the Constitution adopted? Name three prominent members of the constitutional convention. 5. Give two important results of Burgoyne's surrender. 6. Name two accessions to the territory of the United States between 1840 and 1860. 7. How was the question of slavery in Missouri settled? 8. Describe one important battle of the Civil War, giving the year of the war in which it occurred, its locality and result. 9. What were the Alabama Claims and how were they settled? 10. Mention two important historical events of the year 1906.

PHYSIOLOGY.

1. What are the organs of breathing? 2. Describe the structure of the muscles. 3. Why should all food be thoroughly masticated? 4. Explain how the intestines are concerned in digestion. 5. Trace fully the blood from the aorta to the vena cava. 6. Name the bones of the head. 7. What is the function of the lymphatic circulation? 8. What effect has alcohol upon muscular control? 9. How would you remove a cinder from your eye? 10. What can

you say of the healthfulness of milk and ice water as beverages?

READING.

Examiners will conduct an oral examination in reading.

GEOGRAPHY.

1. What resemblance exists between a canal and a strait? Give two examples of each. 2. Describe the climate and rainfall of the states on the Pacific Slope. 3. Locate five cities in Ohio of more than 20,000 inhabitants each, and name one important industry carried on in each. 4. Explain why the days and nights are not always of equal length. At what times of the year are they of equal length? 5. Name ten countries of South America and the capital of each. 6. Give the shortest route of a vessel sailing from New Orleans to Hamburg. 7. Tell what you can of the location and climate of Panama. Why is Panama of interest to all Americans at the present time? 8. To what river system does the Ohio river belong? How far is the Ohio river navigable? 9. Name two Asiatic and one African colony of Great Britain. 10. What and where is each of the following: Hong-Kong, Vesuvius, Puget, Niger, Kingston?

GRAMMAR.

1. What is a phrase? How are phrases classified with respect to use? 2. When is a verb copulative? Redundant? Emphatic? Irregular? 3. Write sentences containing the possessive plural of each of the following: Wolf, alto, country, I, you. 4. Give a synopsis of the verb "to sink" in the indicative mode, active voice, first person, singular number; in the infinitive mode. 5. In the following, what part of speech is each of the words in black type: Not one of us can tell what the future has in store for him? 6. Write sentences using "that" as an adjective, a pronoun and a conjunction; "there" as an adverb of place and an expletive. 7. What kind of a sentence is the following? Classify its clauses. "Do not waste your time by wishing and dreaming, but work earnestly at whatever you can find to do." 8. Give the syntax of to do and whatever in the sentence in the previous question. Parse the words

in black type in that sentence. 9-10. Write a short letter to the editor of your favorite magazine or paper, telling him why you like the same.

ARITHMETIC.

.00087

1. Find the value of $\frac{3}{4}$ of $\frac{\quad}{\quad}$.

$$\begin{array}{r} 3 \quad 7 \\ - + - \\ 8 \quad 20 \end{array}$$

2. A rug 6 yards long and 5 yards wide is placed in the center of a room $7\frac{1}{2}$ yards long by 6 yards wide. What will be the cost of painting the uncovered floor space at $4\frac{1}{2}$ cents a square foot? 3. If you invest \$3360 in railway stock at 84, how many shares will you buy, and what will be your income if the stock pays 4%? 4. How can you find the area of a circle when its circumference is given? 5. On an average, 5000 copies of a daily paper are sold per day. Reckoning three sheets for each copy, how many reams of paper would be required for use in the present month, not including the Sunday edition? 6. A rope 80 feet long reaches from the base of one building to the top of another building, 30 feet high, on the opposite side of the street. How wide is the street? 7. What is a ratio? A proportion? Make (but do not solve) a problem in simple proportion. 8. Find the cost of 10 planks, each 15 feet long, 16 inches wide and $3\frac{1}{2}$ inches thick, at \$2.25 per hundred. 9. What sum of money will produce \$1830 in 2 years, 6 months, at 5%? 10. A steamer arrives at London, $0^{\circ} 0'$ longitude, at 3:30 p. m. The fact is telegraphed without loss of time to Halifax, $63^{\circ} 35'$ west. What time is it when the message is received?

WRITING.

For this branch examiners will grade the manuscript in orthography.

ORTHOGRAPHY.

(10 credits.)

1. Write words illustrating long o, short Italian a, long oo, hard g, long y, and short o. (10 credits.) 2. Write sentences containing the correct use of the following

words: Indict, surplus, chasm, tedious, arid. (10 credits.) 3. Write a rule for the use of the hyphen. Which of the following would you write with a hyphen? Today, mantelpiece, daughter in law, schoolmate, selfmade? (10 credits.) 4. Define and illustrate prefix, derivative word and dissyllable. (10 credits.) 5. Spell correctly each of the following words to be pronounced by the examiner: Pencil, shyly, canteen, demolish; follies, reprisal, traitor, abyss, acid; rarity, concrete, odorous, morgue, pallid; sentinel, maritime, Chesapeake; treachery, domineer, chronicle. (60 credits.)

Pupils' Examination—May 11, 1907.

(Under Act of March 28, 1902.)

PHYSIOLOGY.

1. Explain each of the following in connection with the skin: Cutis, cuticle, mucous membrane. 2. Give the structure and use of the ligaments; tendons. 3. Trace the course of the blood through the heart. What prevents the blood from flowing backward? 4. Whose bones break easier, yours or your grandfather's? Why? 5. Name some foods you would eat to produce fat. Why is milk a desirable food? 6. Of what use to the body is exercise? 7. Give the location and use of the salivary glands. 8. Mention the organs of which the nervous system consists. 9. Locate the following: Eustachian tube, iris, fibula, biceps, gastric juice. 10. Why is alcohol always injurious? Is coffee a harmful stimulant? Why, or why not?

GEOGRAPHY.

1. Which is greater, the polar or the equatorial diameter of the earth? Why? 2. Locate five important cities of the world that are situated on islands. 3. Why do the largest rivers of Ohio flow in a southerly direction? 4. A certain city is 125° from the North Pole. In what zone is it? 5. Name the largest and smallest state in the Union and tell for what industries each is noted. 6. Explain the following terms: Isotherm, metropolis, capital, breakwater, steppes. 7. What is a penal colony? Name two and tell to what country each belongs. 8. Locate important cod,

oyster and salmon fisheries of North America. 9. State one feature in which the government of Great Britain resembles our own; one in which it differs. 10. Where is each of the following: District of Columbia, Everglades, Yosemite Valley, Bartholdi Statue of Liberty, Yellowstone Park?

ARITHMETIC.

1. If your father buys a house and lot for \$4000 with the understanding that he is to pay $\frac{1}{2}$ of the amount in cash and the remainder at the end of 1 year and 2 months with interest at 5%, how much does he then owe? 2. If the bookseller of your town buys his pencils for \$2.16 a gross and sells them to the school children for 3 cents apiece, how much money does he make on a box containing 5 gross? 3. A dealer sold an automobile for \$90 less than the marked price, thereby throwing off 12%. At what price did he sell the automobile? 4. If a cow, tied to a stake, can graze over half an acre, what is the length of the rope by which she is tethered? 5. Last November there were two cloudy days to every 3 clear days. How many days in the month were clear? 6. When shingles cost \$4.75 per thousand, what will be the cost of shingling a sloping roof, each slope being 34' by 18', if 1000 shingles are allowed to 125 sq. ft.? 7. How is the principal found when the time, rate and interest are known? 8. A hotel is insured for $\frac{3}{4}$ of its value, at $1\frac{1}{2}\%$ premium, and the premium amounts to \$250. What is the value of the hotel? 9. If a regiment of 1000 soldiers consumes 12,000 pounds of bread in 15 days, how many pounds will a regiment of 1250 men consume in 30 days? 10. If the entire surface of a cubical box is 5046 sq. in., what is its edge?

UNITED STATES HISTORY.

1. When and by whom was the Mississippi river discovered and explored? The Hudson river? 2. How could you have traveled from New York to Boston in 1776? About how many years later were railroads introduced into the United States? 3. Tell what you can of British efforts to enforce the Stamp Act. 4. Why do you remember four of the following in connection with the Revolution: Gen.

Burgoyne, Benedict Arnold, Paul Revere, John Paul Jones, Robert Morris, Anthony Wayne? 5. Why were the Alien and Sedition Laws unjust? 6. What brought about the War of 1812? How did this war result? 7. By whom was Texas largely settled? Why was there objection in the North to its annexation? 8. What was the outcome of the battle of Gettysburg? Appomattox? 9. Write briefly upon the financial condition of the South at the close of the Civil War. 10. Where, and upon what occasion, was President McKinley assassinated?

WRITING.

In this branch examiners will grade the manuscript in orthography.

ORTHOGRAPHY.

1. What is a primitive word? A derivative word? Form one derivative word from each of the following: Desire, Ohio, rogue, progress. 2. Illustrate in some word the correct use of each of the following: Hyphen, macron, primary accent, secondary accent, prefix. 3. Write with the proper diacritical marks four different sounds of the letter **a**. How many sounds has the letter **o**? 4. Give a rule of spelling for the formation of the plural of **monkey**; a rule for the formation of the past tense of **benefit**. 5. Spell correctly each of the following words to be pronounced by the examiner: Abbreviate, lettuce, anniversary, circular, gallop, rowdies, blonde, foretell, gauging, delinquent, misspell, synonym, frolicsome, peaceable, symmetry, Theodore Roosevelt, visible, coerce, fascinate, epileptic.

READING.

Examiners will conduct an oral examination in reading.

GRAMMAR.

1. What grammatical relation exists between a relative pronoun and its antecedent? Name all the simple relative pronouns. 2. Write the principal parts of the following verbs: Sew, ought, bid, choose and fly. 3. Name three classes of conjunctions. The use of which class or classes makes a sentence compound? 4. Write a sentence containing a clause used as an adjective modifier; a sentence containing a predicate infinitive. 5. What parts of speech

may a noun modify? What parts of speech may modify a noun? 6. What is a participle? Illustrate four ways in which participles may be used. 7-8. Write a letter to one of your friends telling him (or her) why you wish to receive a high-school education. 9. **If you wish to go with me you will have to ask permission of your father.** Point out, and state the use of, all phrases in the above sentence. 10. Parse the words in black type in the following: **There is not a room in the house fit to live in.**

Pupils' Examinations.

Selected Examination Questions submitted by county Boards of Examiners for Special and Subdistrict Graduation, under sections 4029-1, 2, 3 and 4, commonly called the "Boxwell Law."

Clermont County—1900.

GRAMMAR.

1. Define analysis, synthesis, infinitive, copula and conjunction. 2. Write two sentences, one of which shall contain an adjective element of the third class, and the other an objective element of the third class. 3. Correct: Is James as old as me? John had ought to attend school. The dog laid down. 4. Write a sentence with an infinitive used as a noun, and one with an infinitive used as an adverb. 5. Write sentences showing three ways in which a noun may be in the absolute case. 6. Write the plural of son-in-law, ox cart, man-servant, Miss Brown and nine. 7. Give the principal parts of loose, sit, teach, lose and drink. 8. Use in a sentence the possessive plural of son-in-law, a compound passive participle, and infinitive used adjectively and laid as a participle. 9. Analyze: Errors like straws, upon the surface flow; he who would search for pearls must dive below. 10. Parse words in black type in the above sentence.

GEOGRAPHY.

1. Name and locate the zones of calms. What are trade winds? Give their direction in the northern hemisphere. 2. What is the snow line? What is its height at the equator? 3. Name five bays on the coast of Maine. 4. How would you go by water from Buffalo, N. Y., to Jackson, Miss.? 5. Name the townships of Clermont county and bound the one in which you live. 6. What states of South America have no sea coast? Bound Bolivia. 7. Name five states of the Turkish peninsula, and what gulf almost divides Greece into two parts? 8. What three large islands are crossed by the equator? 9. Name five subdivisions of

Australia and give the capital of each. 10. What and where are Pretoria, Tananarivo, Natal, Nephon, Crimea?

PHYSIOLOGY AND HYGIENE.

1. Define: Ligament, pericardium, synovia, patella, morphine. 2. What is saliva? How is it secreted? What is its function? 3. Of what kinds of matter is the nervous system composed? What is the function of each? 4. To what is the life-giving principle in the atmosphere due? What becomes of it in the body? 5. Tell what you can about the heart. 6. How many teeth? Name the different classes. 7. What portion of the eye brings the rays of light to a focus on the retina? What is the cause of nearsightedness? Of farsightedness? 8. How many bones compose the spine? 9-10. Give an account of the care of the body under the following: Clothing, food, bathing, drink.

UNITED STATES HISTORY.

1. Name five of the original thirteen colonies, with place and date of settlement of each. 2. Name five statesmen connected with the Revolutionary period, with an account of services of one. 3. What was the Constitutional Convention? When and where did it meet? 4. Mention the different portions of territory acquired by the United States, and tell how each was obtained. 5. Who was General Wolfe? Cyrus Field? Horace Greeley? Israel Putnam? John Paul Jones? 6. Name five Union and five Confederate generals of the Civil war. 7. What were the Alien and Sedition laws? 8. What Presidents had been soldiers? 9. What President was impeached? What body has power to try all cases of impeachment? 10. Give events connected with 1676, 1755, 1803, 1861, 1876.

ARITHMETIC.

1. Add .34 yard, 1.07 feet and 8.92 inches. 2. A man had \$300. After he had spent \$225, what per cent. did he have left? 3. An agent receives \$1323.54 to cover cost of goods and commission at 8%. What was his commission? 4. The proceeds of a note discounted at a bank for 60 days at 6% were \$197.90. What was the face of the note? 5. The cost of insuring a house worth \$4500 for $\frac{4}{5}$ of its value was \$32.75; the cost of the policy was \$1.25. What was the

per cent. of insurance? 6. If William's services are worth $\$15\frac{2}{3}$ a month when he labors nine hours a day, what ought he receive for $4\frac{2}{5}$ months when he labors 12 hours a day? 7. I buy \$200 worth of goods, $\frac{1}{5}$ to be paid now, $\frac{2}{5}$ in 5 months, the rest in 10 months. Find the average time of payment. 8. Find the side of a cube equal to a mass 288 feet long, 216 feet broad and 48 feet high. 9. Find the area of a triangle whose sides are 13, 14 and 15 feet. 10. How many feet in an inch board 12 feet 6 inches long, 1 foot 3 inches wide at one end and 11 inches wide at the other end?

PENMANSHIP.

No radiant pearl which crested fortune wears,
 No gem that twinkling hangs from beauty's ears,
 Not the bright stars which night's blue arch adorn,
 Nor rising suns that gild the vernal morn,
 Shine with such luster as the tear that flows
 Down virtue's manly cheek for other's woes.

Clinton County—1901.**ARITHMETIC.**

1. Divide 2-13 of $5\frac{1}{2}$ by 7-6 of 41, and express the answer as a decimal. 2. Divide 3 sq. rd., 20 sq. yd., 4 sq. ft., 29 sq. in. by 18. 3. Find 3-10 per cent of 3-10 of \$1,500. What per cent of 9.6 is 40% of 30? 4. Half of A's money is equal to $\frac{3}{4}$ of B's, and A has \$18 more than B. How much has each? 5. In what time will \$460 amount to \$540.05 at 5 per cent? 6. If 12 men can build a wall 30 feet long, 6 feet high and 3 feet thick in 15 days by working 12 hours per day, in what time will 60 men build a wall 300 feet long, 8 feet high and 6 feet thick, working 8 hours per day? 7. A man invested 8-5 of his capital in bank stock, $\frac{3}{4}$ of the remainder in real estate and had \$4,260 left. What was his capital? 8. Find the face of a 90 days' draft that cost \$850 purchased at a discount of $1\frac{1}{8}$ per cent, interest $4\frac{1}{2}$ per cent.

GRAMMAR.

1. Give a complete classification of the noun by diagram.
- 2 Write a simple, complex and compound sentence. 3.

Write a sentence containing a verb in each of the five modes. 4. Use in a sentence a clause as subject, a phrase as predicate and a phrase as object. 5. Define synthesis, synopsis, inflection and participle. 6. How many elements may a sentence contain? Illustrate each element with a sentence. 7. How is the possessive case of nouns formed? 8. Diagram: Hypocrisy is a sort of homage that vice pays to virtue. War is a game, which, were their subjects wise, kings would not play at.

GEOGRAPHY.

1. Name the states of the Union that touch the great lakes and give the capital of each. 2. Follow the parallel of latitude on which we live around the world, naming the divisions it crosses. 3. Name the Republics of Europe and capitals of each. Name the absolute monarchies of Europe and the capital of each. 4. Name (a) mountain system in Italy; (b) river in northern part; (c) celebrated volcano; (d) a leading product. 5. Name the cities you would pass in following the Missouri river from its source to where it empties into the Mississippi. 6. Bound the United States by parallels and meridians. 7. What bodies of water form the following peninsulas: Iberian, Crimea, Arabia, Scandinavian? 8. Locate and tell what the following are: Yucatan, Luzon, St. Helena, Singapore.

PHYSIOLOGY.

1. Of what does physiology consist? 2. Name the bones of the skull. 3. Name and illustrate three kinds of joints. 4. Name and locate the valves of the heart. 5. Of what does the blood consist? Where is it purified? 6. Name the parts of the brain. Of what does the spinal cord consist? 7. Of what is the nervous system composed? Name two classes of nerves, and describe each. 8. What causes the air in a room to become impure? Define stimulant, and give name of one.

UNITED STATES HISTORY.

1. Name the thirteen original colonies and tell when and where each was first settled. 2. What was done by each of the following men: De Soto, Ponce de Leon, Roger Williams, William Penn, Abraham Lincoln and Daniel

Webster? 3. When were negro slaves first brought to this country? Who were the Pilgrims? What was the Missouri Compromise? 4. The Civil War: (a) Date, (b) causes, (c) six battles with their dates, (d) four generals on each side, (e) result. 5. Why are the following days national holidays: May 30, February 22, July 4, December 25? 6. Give date of following: Revolutionary War, Mexican War, Spanish American War. Name the 3d, 7th, 10th and 18th Presidents. 7. Who is President of United States? What is his salary? To what political party does he belong? Who is Governor of Ohio? What is his salary? For how many years is the Governor elected? The President? 8. Why are the following dates important in United States history: 1850, 1776, 1733, 1492, 1863, 1832, 1819, 1803?

Crawford County—1901.

ORTHOGRAPHY.

1. Name the vowels. 2. Mark a so as to indicate all of its sounds, and write words to illustrate. 3. What three guides have we for pronunciation? Which is the safest? 4. Write the proper abbreviations for West Indies, United States Navy, subjunctive, postscript, Maine, hogshead, the same company, and before noon. 5. Spell fars, qual, klen, despar, compar, frat, kutikle, kemist, disgiz. 6. Mark the following words so as to clearly indicate their proper pronunciation: Lodge, what, cent, guest, do, pur, done, flaw, class, deign, caprice, and scorn. 7. Define tiny, finance, horizon, ancient, quotient, obstinate, luxury, novice, minuent, syntax, and equinox.

ARITHMETIC.

1. Write in words the following number, 6253971433267. Write in Arabic notation two billion ten thousand and ten. 2. Multiply the sum of 148 and 56 by their difference and divide the product by 23. 3. What would 1 T. 6 cwt. 4 lb. 2 oz. of flour cost at $\frac{1}{8}$ c. a lb.? 4. What will a pile of wood, 20 ft. long, 12 ft. wide and 6 ft. high cost at \$2.25 per cord? 5. B has \$1,600, $\frac{3}{4}$ of B's plus \$400 equals 4-3 of C's. How much has C? 6. From .25 da. subtract .8 hr. and .5 min.

7. A dealer sold two horses for \$150 each; on one he gained 25 per cent and on the other he lost 25 per cent. Did he gain or lose by the transaction? How much? 8. A note of \$320 was given August 3, 1893, and paid yesterday. Find the amount due, simple interest at 6 per cent. 9. \$1,000. Bucyrus, Ohio, May 2, 1882. Ninety days after date, I promise to pay J. A. Mulford, or order, one thousand dollars for value received. S. S. S. Discounted June 16, 1882, at 6 per cent. Find when due, time of discount, bank discount and proceeds of this note. 10. How many acres in a road $1\frac{1}{2}$ miles long and $57\frac{3}{4}$ ft. wide?

GEOGRAPHY.

1. Name ten counties in Ohio and the county seat of each. 2. Bound Crawford county and name the townships. 3. Name the five great powers of Europe and the capital of each. 4. Name the zones and give the width of each. 5. Of what countries are the following cities the capitals: Sucre, Lisbon, Stockholm, Brussels, Berne, Vienna, Fez, Algiers, and Mourzouk. 6. Name the principal mountain systems of North and South America, Africa and Asia. 7. Define latitude, longitude, volcano, mountain, earthquake, plateau and atmosphere. 8. What and where are the following: Shasta, Niger, Caracas, Aral, Lyons, Orkney and Corsica.

PHYSIOLOGY AND HYGIENE.

1. Of what use is the skeleton? Name three natural divisions of the bones of the skeleton. 2. How are bones nourished? 3. Why is bathing important to health? When should one bathe? Of what value is soap? 4. What is meant by digestion? 5. Where is the liver situated, and what office does it perform? What effect has alcohol on the liver? 6. Where would you compress a bleeding artery to stop its flow? Where a vein? 7. What is the diaphragm, and what office does it fulfill? 8. Define coagulation and state its use.

UNITED STATES HISTORY.

1. Write at least ten lines on the biography of Columbus. 2. State the causes that led to the American Revolution. 3. Write an account of Arnold's treason. 4. Describe the

annexation of Texas. 5. What was the attitude of England toward the United States during the Civil War? 6. What great territory was purchased in 1867, and what price was paid for it? 7. In what battle and by what commander were the words, "Don't give up the ship," used? 8. What was accomplished by the late Civil War?

Erie County—1901.

ORTHOGRAPHY.

1. Mark all the different sounds of a and e. 2. Give five different places where capital letters should be used. 3. Give complete analysis of the word "unction." 4. What distinction between incite and insight; relic and relict; satire and satyr; prophesy and prophecy; poplar and popular; populace and populous? 5. Correct the spelling if necessary: Dogerel, guwgaw, flacid, hypocrisy, hairloom, indelible, inferred, jaguar, kerosene, maelstrom.

ARITHMETIC.

1. What is a unit? Common fraction? Decimal fraction? Mixed number? Give example of each one. 2. Multiply $16\frac{3}{4}$ by the sum of 12-3 and 7-12, and divide the product by .025. 3. A man owning $\frac{4}{5}$ of a ship sells A $\frac{1}{4}$ of his share, and then sells B the remainder for \$3,000. At this rate, what is the value of the ship? 4. Find the principal which will yield \$336 interest in 3 years and 6 months at 8 per cent. 5. A cistern, whose bottom is 5 feet square, contains 250 cubic feet of water. What is the depth? 6. A and B rent a pasture for \$14.40. A puts in 3 cows for 7 days, and B 3 cows for 9 days. How much should each pay? 7. The value of the property in a certain village is \$150,000, and said village contains 40 polls, taxed at \$1.25 per head. If a tax of \$800 is to be raised, what rate must be levied on the property, in mills? 8. Extract the square root of 2304. 9. Bought 25 shares of N. Y. Central at $4\frac{1}{2}$ per cent below par, brok. $\frac{1}{2}$ per cent, and sold them at $4\frac{1}{2}$ per cent above par, brok. $\frac{1}{2}$ per cent. Find my gain. 10. The long. of A is 45 degrees, 23 minutes, 45 seconds west, and of B 63 degrees, 46 minutes and 45 seconds west. Find difference in time.

GEOGRAPHY.

1. Define geography. 2. In which zone do we live? 3. What mountain system in the eastern part of the United States? In the western part of the United States? 4. Name the largest State in the Union. The smallest. 5. What large sea between Europe and Africa? 6. Locate the Transvaal and Orange River Republics. 7. What large island east of Africa? To which country does it belong? 8. Through what countries of South America does the equator pass? 9. Name the New England States. 10. Name the largest city of Ohio. Describe the Scioto river.

GRAMMAR.

1. What grammar have you studied, and how far did you get? Define etymology and syntax. 2. Give an outline of the noun and give a definition of case. 3. What cases are capitalized words in the following: I did not know his NAME was SAMUEL. Where is JOHN? I desire to be a TEACHER? 4. Define personal and relative pronouns. 5. Parse capitalized words: I know WHAT he said. There is the man WHOSE house was burned. WHOM do you take me to be? 6. Give two copulative, two transitive and two passive verbs. 7. Give a synopsis of the verb "see" in indicative mode. 8. Analyze the following: How many quarts are there in a gallon?

PHYSIOLOGY.

1. Give some reasons why you study physiology. 2. Name the bones of the upper extremities. 3. How many nervous systems are there? Name them. 4. Give the three general classes of food and a type of each. 5. What is the normal temperature of the body? How often do we breathe under ordinary circumstances in a minute? 6. What is a tendon? A ligament? Give use of each. 7. Give the parts of a tooth; also the number in the first set. 8. Into how many parts is the brain divided? Name them. 9. How many valves has the heart? Name them and give their use. 10. You may give the effect of the excessive use of alcohol upon the liver as discussed in the text-book which you studied.

UNITED STATES HISTORY.

1. Name an Italian, an Englishman, a Frenchman and a Spaniard making discoveries in America, and tell what each discovered and where. 2. Name the first five permanent settlements of the United States, and tell in which State each is located. 3. Who were the following: Walter Raleigh, Pedro Menendez, Balboa, Roger Williams, Peter Stuyvesant, John Smith, William Penn, George Calvert, John Carver, James Oglethorpe? 4. Give causes of the Revolution and name two battles and two generals on each side in this war. 5. Who were the first five Presidents of the United States? 6. In whose administration was the Louisiana Purchase made; from whom and for what sum? 7. What war, besides the Revolutionary, was fought between Great Britain and the United States? 8. Who is now President of the United States? Vice-President of the United States? Governor of Ohio? 9. Name five events in the history of the United States concerning slavery. 10. What Presidents were assassinated? Who then became President?

Fayette County—1901.**ORTHOGRAPHY.**

1. Define subvocal and aspirate and give three examples of each. 2. Give the substitutes in the following words: son, feint, pique, and was. 3. Write and define words homophonous with pole, cite and sent. 4. Indicate the proper pronunciation of chyle, cupboard and bellows. 5. Write the plurals of leaf, wagon-load, fife, lady, k, and monkey. 6. Write the possessive plural of man, lady and woman. 7. Add the suffix, ing, to fret, rain, omit, consent. 8. Define the following words according to the meaning given by the prefixes and suffixes: friendless, beggar, eatable, leaflet, replant, postscript, benediction, malediction, semitone, and monotone.

ARITHMETIC.

1. One city is in longitude $10^{\circ} 18' 29''$ E, and another in $80^{\circ} 3' 46''$ W. When it is 5 o'clock a. m. at the former place, what time is it at the latter? 2. Express $6\frac{1}{4}$ divided

by $16\frac{2}{3}$ as a decimal. 3. A wholesale merchant sold goods at 20 and $12\frac{1}{2}\%$ off, and received \$700 for them. What was the list price? 4. A drover sold hogs for \$2626.40, thereby gaining 12%. What did they cost? 5. The interest on \$800 for 2 years 6 months was \$120. What was the rate of interest? 6. In a co-partnership A contributed \$500 for 8 months, B \$450 for 6 months and C \$300 for 5 months. They gained \$246. How should it be divided? 7. Divide the sum of $4\frac{1}{3}$ and $2\frac{1}{2}$ by their difference. 8. A square field contains 47 acres and 49 square rods. Find the cost of fencing it at $66\frac{2}{3}\text{¢}$ per rod. 9. How many barrels of water will a cylindrical tank contain which is 5 feet in diameter and 4 feet deep?

GRAMMAR.

1. Copy the following sentences and underscore the abstract and collective nouns: (a) There is hardly any place, or any company, where you may not gain knowledge if you please. (b) His army is a ragged multitude of hinds and peasants, rude and merciless. 2. Make sentences of your own containing the following phrases: "North American continent," "in front of," "Isthmus of Suez," "against my will." 3. What is voice? Give example. 4. Write a sentence containing a relative pronoun; define relative pronoun and antecedent. 5. Decline the third person pronoun, he, she, it. 6. Diagram: "Lady Evelyn is a tall, somewhat good-looking, elderly lady, who wears her silver white hair in old-fashioned curls." 7. With respect to use, sentences are divided into four classes. Name them by writing an example of each. 8. Parse words in capitals: (a) WHATEVER IS is right. (b) He is an OLD friend of OURS. (c) I speak as to wise MEN; JUDGE YE WHAT I say. 9. Give the principal parts of the verbs: stride, swear, tear, work, chide, clothe, and fling. 10. Name the tenses, the modes, the adjectives, the participles.

GEOGRAPHY.

1. Define geography and name its three branches. 2. Name the races of men, and tell what part or parts of the world each inhabits. 3. Define latitude and longitude. 4.

Name the five most populous countries of Europe. What is the capital city of each? 5. Give the latitude and longitude of any three or more large cities. 6. Describe the Gulf Stream. 7. Draw a map of Ohio and place upon it four rivers and four large cities. 8. Define large circles and small circles, giving an example of each. 9. Locate Madagascar, Borneo, Luzon, Cuba.

PHYSIOLOGY.

1. Give the divisions of the human skeleton and name the bones in one division. 2. Name the parts of the alimentary canal. 3. Briefly describe the processes of digestion. 4. Describe the skin and give its functions. 5. Give the reasons why food should be cooked. 6. Classify the permanent teeth. 7. Describe the circulation of the blood. 8. Name the nerves of special sense and describe the spinal nerves. 9. Name the principal narcotics and give effects of alcohol upon the nervous system. 10. Name the coats of the eye, the bones of the ear and membranes that invest the vital organs.

UNITED STATES HISTORY.

1. Give a brief account of the discovery of America. 2. (a) Name an English discoverer. (b) A French discoverer. (c) Tell what each discovered. 3. (a) Who was De Soto? (b) Cortez? (c) John Smith? 4. Tell how Rhode Island was founded. 5. Give a brief account of the first battle of the American Revolution. 6. Name the Presidents who died while in office and tell the manner of their death. 7. Who were Daniel Boone and George Rogers Clark? 8. Name three great battles of the Civil war, giving dates. 9. Give a brief sketch of General Grant. 10. Name the thirteen original colonies.

Hancock County—1901.

ARITHMETIC.

1. How long would it take a person to count a million silver dollars, at the rate of 100 a minute and working 8 hours a day? 2. What is the length of a degree on a circle whose diameter is 18 feet? 3. The face of a draft is \$400; time 30 days; interest 6%; discount $\frac{1}{8}\%$. Find the cost.

4. From 10 bushels subtract the sum of 3.64 bushels, 9-16 bushels and 1 bushel, 3 pecks, 6.52 quarts. 5. A note of \$125, made January 4, 1887, is paid May 3, 1888, with interest at 5% per annum. Find the amount paid. 6. If I lose 10% by selling goods at 18¢ a yard, for what must they be sold to gain 20%? 7. Mr. Jones insured his house, worth \$48,000, for one year for $\frac{5}{6}$ of its value, at $\frac{3}{4}$ %. What would the insurance company lose if the house should burn? 8. Five quarts equal what decimal of a peck? 9. Extract the equare root of 182.25. 10. At 10¢ a quart, what are 3 bushels, 1 peck and 5 quarts of chestnuts worth?

GRAMMAR.

NOTE.—Underline words required in these sentences.

1. Write a sentence containing a noun used as the subject of a sentence. 2. Write a sentence containing a noun used as the predicate of a sentence. 3. Write a sentence containing a noun in the nominative case by apposition. 4. Write a sentence containing a noun used as the direct object of a verb. 5. Write a sentence containing a noun used as the predicate after an infinitive. What is the case of this predicate now? 6. Write a sentence containing a noun used as the object of a preposition. 7. Write a sentence containing a noun in the objective case by apposition. 8. Write a sentence having "what" used as a relative pronoun. 9. Write a sentence having "what" used as an interrogative pronoun. 10. Write a sentence having "what" used as an adjective. 11. Write a sentence having "what" used as a relative adjective. 12. Write a sentence having a conjunctive adverb. 13. Write a sentence having a relative adverb. 14. Write a sentence having a co-ordinate conjunction. 15. Write a sentence having a subordinate conjunction. 16. Write a sentence containing an infinitive used as the subject of a verb. 17. Write a sentence containing an infinitive used as the object of a verb. 18. Write a compound sentence. 19. Write a complex sentence. 20. Write a declarative or assertive sentence. 21. Write an interrogative sentence. 22. Write an imperative sentence. 23. Write an exclamatory sentence. 24. Write an expression containing an interjection. 25. Write a sen-

tence in which you use your own name. 26. Diagram the the following sentences: (a) Near the banks of the "bonny Doon" stands the little clay-built cottage in which Robert Burns was born. (b) It is doubtful whether the boys understand what I mean. (c) We cherish the hope that he will return. (d) There is a tide in the affairs of men, which, taken at the flood, leads on to fortune. (e) We know what master laid thy keel, what workmen wrought thy ribs of steel.

GEOGRAPHY.

1. Where is the Yukon river? For what is the Yukon region noted? 2. England and Labrador are in the same latitude. Why so great a difference in their climate? What makes the western coast of the United States warmer than the eastern coast? 3. Give the leading occupations and productions of Ohio. 4. Why do the New England States excel in the manufacture of certain articles? What are the leading articles manufactured in the New England States? 5. Write five lines giving the important facts about California. 6. Draw an outline map of the United States, showing the chief river systems and mountain highlands.

PHYSIOLOGY.

1. Describe the eyes as (a) coats, (b) humors, (c) lens, (d) iris, (e) pupil. 2. What is coagulation? Give its use. 3. Name the juices that aid in digestion and tell where each is secreted. 4. Describe the arteries and veins. 5. Name some of the evil effects of alcohol on the human system. 6. Locate the cilia and give their use. The villi and their use. 7. Name the three divisions of the brain and give use of each division. 8. In case a child swallowed poison, what would you do? 9. Describe the red and white corpuscles of the blood and give use of each. 10. Describe the heart as to (a) shape, (b) size, (c) location, (d) covering, (e) lining, (f) cavities.

UNITED STATES HISTORY.

NOTE.—Penmanship will be graded from this list.

1. Tell where, when and by whom Massachusetts, Virginia, New York, Georgia and Florida were settled. 2.

Give time, cause, leading events and results of the French and Indian war. 3. Why is the surrender of Burgoyne considered a great event in the Revolutionary war? 4. For what are Sumpter, Marion and Pickens noted in the Revolutionary war? 5. Tell of the Missouri Compromise. 6. For what is Stephen A. Douglass especially noted? 7. Who was Dred Scott? For what is Chief Justice Taney noted? For what is John Brown noted? 8. For what did the Thirteenth Amendment to our Constitution provide? The Fourteenth Amendment? The Fifteenth Amendment? 9. How does a bill become a law?

Hardin County—1901.

ARITHMETIC.

1. Write a number containing six periods and name the periods. Write in Roman notation 117, 1901, 623, 81 and 93. 2. A certain dividend is 739000; the quotient is 214; the remainder 70. What is the divisor? 3. A man bought a tract of land 35 rods long and 32 rods wide. What did it cost at \$60 per acre? 4. How many seconds in the month of February, 1876? 5. Find the G. C. D. of 2145 and 3471. Find the L. C. M. of 13, 29, 52 and 87. 6. Write an example of each kind of fraction. Multiply one hundredth by one ten-thousandths. Divide .102048 by 3189. 7. I had \$800 in bank and drew out 30% of it. How much had I left? 8. Find the amount of \$500 at 6% from March 5, 1898, to the present time. 9. Two men go into partnership. A puts in \$800 and B \$1200; they gain \$600. What is each man's share? 10. Find the unknown term of the following: 68: what :: 51 :27? (Work must be on your manuscript.)

GRAMMAR.

1. Give case of nouns and pronouns in the following sentences: (a) John, I saw you give Mary your book. (b) Chasing rainbows is a favorite occupation of some people. 2. Give mode and tense of verbs in the following sentences and write the subject of each verb: (a) James wants me to buy him a horse if I go to Mr. Martin's sale. (b) If you would have the questions answered correctly, answer them yourself. 3. Tell what the adjectives and adverbs in the

following sentences modify: (a) Very small children should retire quite early. (b) Reverently we should bow our heads. (c) Many people will attend church tomorrow. (d) "An idle brain is the devil's workshop." 4. Diagram the following sentences: (a) The bandit tried to kill the express agent. (b) The farmer has finished sowing oats. (c) The Vice-President killed a very large mountain lion while he was in Colorado.

GEOGRAPHY.

1. What are the three movements of the sea and what is the cause of tides? 2. What are deltas? Give three large rivers that have deltas. 3. What are great and small circles? Give an example of each. 4. What is the area of the earth? How much is land and how much water? 5. What is a strait? What is a harbor? 6. What grand divisions in the eastern and western continents? 7. Name two rivers in each of the following: South America, Europe, Asia, Africa and Australia. 8. Name a strait touching each of the following: South America, Europe, Asia, Africa and Australia. Also a cape in each. 9. Name the five great lakes in the order of their size, beginning with the largest. 10. Name four bays on the Atlantic and one on the Pacific coast of the United States.

PHYSIOLOGY.

1. Name the bones of the skull. 2. Give two differences in cutis and cuticle. 3. What are the different parts of the tooth and give two differences in the temporary and permanent sets. 4. From what glands does the saliva come to the mouth? From what glands does the perspiration issue? 5. What is the composition of blood and what are the organs of circulation? 6. What is the difference in inspired and expired air? 7. What is the use of the motor and sensory nerves? 8. Name the special senses and the nerves that supply two of them. 9. Name the different parts of the ear and describe the middle ear. 10. What and where are the following: Radius, retina, pleura, cerebrum and diaphragm?

UNITED STATES HISTORY.

1. Where was Columbus born? 2. Who searched for the "Fountain of Youth" in Florida? 3. What is the oldest

town in the United States? 4. Who discovered the Hudson river? 5. Who was the proprietor of Maryland? 6. What man led in the settlement of Georgia? 7. What fort is erected on the site of old Fort Duquesne? 8. What city used to be called New Amsterdam? 9. Name two generals killed at Quebec in the French and Indian war. 10. Who was king of England during the Revolution? 11. At what place did Burgoyne surrender? 12. Who was the most noted foreigner that helped us during the Revolution? 13. Who was our first Secretary of the Treasury? 14. In whose administration did we purchase Louisiana Territory? 15. In whose administration was the war of 1812? 16. Who invented the steamboat? 17. Who was "Old Rough and Ready"? 18. What English-built Confederate ship did us most damage in the Civil war? 19. In whose administration was the "Presidential Succession Law" passed? 20. In whose administration was the Spanish-American war?

Henry County—1901.

ORTHOGRAPHY.

1. What is etymology? Define accent. 2. Define root, word, prefix and suffix. 3. What is spelling? Phonetic spelling? Orthographic spelling? 4. What is an elementary sound? 5. Indicate by diacritical marks the vowel sounds in the following words: Psalm, fall, rat, move, coop, wallet, machine, grass, calf, path, was, fast, master.

ARITHMETIC.

1. By counting eggs 4, 6 or 10 at a time a farmer had 3 left over in each case. Find the least number he had. 2. If $\frac{2}{3}$ of a ship is worth \$1200, how much is $\frac{5}{6}$ of it worth? 3. How much will 1795 bricks cost at \$4.75 per M? Solve decimally. 4. Find the cost of 3759 lbs. of hay at \$7.25 per ton. Solve decimally. 5. Find the capacity in bushels of a bin whose dimensions are 4x6x8 feet. 6. Find the simple and the annual interest of \$373 for 3 years. 7 months, 15 days, at 8%. 7. Get the true and bank discount of \$590 due in 2 years, 8 months, at 9%. 8. The sides of a scalene triangle are 42, 56 and 60 rods. Find number of acres.

GRAMMAR.

1. (a) Define grammar. (b) Distinguish between analysis and synthesis. 2. Define and classify each, language and sentence. 3. Classify nouns and illustrate each class in a sentence. 4. Name, number and define the parts of speech. 5. Write sentences containing each part of speech, and underscore and number as above. 6. Give rules and illustrations for the formation of the plural, nominative and possessive forms. 7. Classify verbs and define and illustrate each class. 8. Make a list of five words and use each in sentences as two different parts of speech. 9. Analyze or diagram: "I will try to be kind to all harmless living creatures, and to protect them from cruel usage." 10. Capitalize, punctuate and parse fully the nouns, pronouns, adjectives and verbs in the following: "Franklin said the reading of one good book aroused him and made him what he was."

GEOGRAPHY.

1. Name and locate the oldest town of the United States. Name three mountain ranges of the Appalachian system. 2. Name two States east of the Mississippi river having neither sea nor lake coast. 3. How does continental climate differ from insular climate in the same latitude? 4. Through what countries of South America does the equator pass? 5. Name the three largest cities of the United States. Give plausible reasons why they, rather than others, are the largest. 6. Give a water route from St. Petersburg to St. Paul. 7. What bodies of water are united by the Suez Canal? 8. Name six of the articles usually shipped from the north to the south by the Mississippi and its branches.

PHYSIOLOGY.

1. State some benefits derived from the study of physiology. 2. What method or methods did your teacher pursue in presenting this subject? 3. Name the different forms of bones. Why so many different forms? 4. Name and locate three bones, three muscles, three nerves. 5. Why is the skull oval? What does it contain? 6. Mention the special senses and their nerves. 7. Give the divisions

of the alimentary canal. Why called alimentary canal? 8. Describe the following: Artery, auricle, coccyx, pupil and villus.

UNITED STATES HISTORY.

1. Tell of the state of geographical knowledge in the fifteenth century. 2. Give a description of the native races of North America and their relations to the early colonists. 3. Write of Columbus, his trials and successes. 4. Describe the settlements at Jamestown and at Plymouth and their development. 5. Compare the style of life in the northern and southern colonies during the colonial period. 6. What were the rival claims of the English and the French in America? What did they cause and what were the results? 7. Name the colonies that formed the thirteen original States, where first settled and by whom and with what motive. 8. Tell of educational interests in the colonies before independence. 9. Name the wars in which the United States has engaged since the Revolution, giving the cause and result of each. 10. Write seventy-five or more words on important events that have happened this year.

Highland County—1901.

ARITHMETIC.

1. What is arithmetic? Addition? Numeration? Division? A fraction? 2. The factors of a dividend are $6 \times 4 \times 8 \times 12 \times 18 \times 4 \times 7$ and the factors of the divisor are $24 \times 48 \times 36 \times 14 \times 2$. What is the quotient? 3. Add $2\frac{3}{4}$, $5\frac{6}{7}$, $8\frac{5}{9}$, $7\frac{8}{15}$, $18\frac{7}{63}$, $11\frac{3}{21}$, $4\frac{5}{7}$. 4. I paid \$1330.75 for a lot of groceries, which was 3% discount from the face of the bill. Find amount of bill. 5. If a bookseller makes 25¢ on an atlas which he sells for \$1.75, what is his per cent. of profit? 6. Find the amount of \$210.25 for 2 years, 7 months and 20 days, at 7%. 7. A note of \$300 is dated July 1, 1873. Indorsements: Jan. 1, 1874, \$109; July 1, 1874, \$100. What was the amount due January 1, 1875, interest at 6%? 8. Bought a bill of goods, on 8 months' credit, amounting to \$260; if money is worth 6%, what sum will pay the debt in cash? 9. How many bricks, each 8 inches long, 4 inches wide, 2.25 inches thick, will be required for a wall 120 feet long, 8 feet high, 1 foot 6 inches

thick? 10. How many yards of carpet $1\frac{1}{2}$ yards wide will cover a floor 18 feet by 15 feet?

GRAMMAR.

1. Write three sentences having the verb in active voice and change to passive. 2. Name the classes of common nouns and define each class. 3. Give two differences between personal and relative pronouns. 4. Correct, if necessary: (a) He will divide the money between you and me. (b) None but you and I will go. (c) Neither you or I are to be blamed. (d) The boys' hats were blown into the lake. (e) He lay the book on the table and laid down to rest. 5. Write a sentence having the verb in potential mode, passive voice, present perfect tense, third person, singular number. 6. (a) Write a sentence having a participle used as a noun; as an adjective. (b) Write a sentence having an infinitive used as a noun; as an adjective. 7. Decline a personal pronoun in the second person. 8. Give plural of following nouns: vermin, executor, woman, man, servant, handfull, penny, Knight-Templar, beau, box, ox. 9. Diagram:

The snow had begun in the gloaming,
And busily all the night
Had been heaping field and highway
With a silence deep and white.

10. Give case of nouns in **black type**, and person and tense of verbs in **black type** in number nine.

PHYSIOLOGY.

1. Why should we study physiology? 2. Name the bones of the head. 3. About how many muscles are there? What are their uses? 4. What is digestion? Assimilation? 5. What is ventilation? Why is it necessary? 6. Why should alcoholic liquors be avoided? Name several alcoholics. 7. What evils arise from rapid eating? 8. What exercise is best for children? 9. What are sensory nerves? Motor? Spinal nerves? Cranial nerves? 10. Name five narcotic poisons. Are tea and coffee wholesome?

GEOGRAPHY.

1. Of what uses are latitude and longitude? 2. Trace the meridian of Memphis. What is the difference of time

between the meridian of Memphis and the seventy-fifth? 3. Bound West Virginia; give capital and principal products. 4. What imaginary line divides the mountainous from the low regions of Europe? 5. Into what four classes are coral formations divided? Describe each. 6. What is a border sea? Give five examples. 7. What do you understand by the phenomena of looming? 8. Name the townships in Highland county and bound the one in which you live. 9. Why should the temperature of the atmosphere decrease with altitude? 10. Why is the rainfall heavier in mountainous regions than that of plains?

UNITED STATES HISTORY.

1. Tell what you know of Acadia. 2. Who founded the Bank of North America? 3. When and where was the first settlement in Mississippi? In Alabama? 4. What was Jefferson's objection to the Constitution of the United States? 5. When was the Bank of the United States established? How many times did it fail? Time of final failure? 6. Who was Sir William Johnson? 7. For what is Charleston, South Carolina, noted in American history? 8. What forts formerly occupied the sites of Chicago and Pittsburg? 9. How long did the Swedes maintain a separate government in the United States? Sketch the history of their state. 10. What tribe of Indians became the sixth nation in the League of the Iroquois?

Appendix No. 1.

**BOXWELL-PATTERSON EXAMINATIONS, APRIL 18,
1908.**

UNITED STATES HISTORY INCLUDING CIVIL GOVERNMENT.

1. How many voyages did Columbus make? What was the result of one? 2. Give an important fact about each of these: John Winthrop, James Oglethorpe, Sir William Berkeley, Benjamin Franklin, Alexander Hamilton. 3. Who discovered the following: Mississippi river, Pacific ocean, Hudson river, Florida? 4. Name one of the colonial wars, and give its causes and results. 5. Give a brief account of Burgoyne's campaign, telling its object and outcome. 6. Explain briefly what is meant by the Declaration of Independence. 7. Tell from whom and how the United States obtained the territory embraced within each of these states or territories: Ohio, Missouri, California, Florida, Alaska. 8. Name three great American inventions with the name of the inventor of each. 9. Connect each of these names and places with the history of the Civil War: Fort Sumter, Gettysburg, Appomattox, W. T. Sherman, Admiral Farragut. 10. What are the qualifications of a voter in Ohio? What is meant by "the legislature," and how is it chosen?

PHYSIOLOGY.

1. What purposes do bones serve? What quality of bone is due to the presence of (a) mineral matter; (b) animal matter? 2. Describe and give an example of a hinge joint. 3. Name the cavities of the heart. 4. State two purposes of the circulation of the blood. 5. What fluid in the body has to do chiefly with the digestion of (a) fats, (b) starch, (c) albumen? 6. Name (a) a voluntary muscle, (c) an involuntary muscle. 7. Of what does the cerebro-spinal nervous system consist? 9. Why is it especially dangerous to perform surgical operations upon confirmed beer drinkers? 9. Name five vegetable foods and two mineral foods. 10. Draw a cross section of the eye. Name its coats and humors.

READING.

Examiners will conduct an oral examination in reading.

ARITHMETIC.

Answer these questions: How many years have you studied arithmetic? What books have you studied? Have you been doing eighth grade work since the beginning of the present school year? 1. Find the total exact cost of $4\frac{3}{4}$ pounds of butter at 32 cents a pound, 4 dozen and 10 eggs at 18 cents a dozen, $\frac{1}{2}$ peck of potatoes at 80 cents a bushel. 2. Solve: $(.0004 + .055 + .3456) \times (\frac{1}{2} - .0256) \div .01$. 3. A certain subtrahend is $11\frac{2}{3}$, the remainder 15%. Find the minuend. 4. John can spade a garden in 6 days, Thomas in 5 days, James in 4 days. If all unite and work at the usual rate, how long will it take them together? 5. A young man inherited some money. He invested \$500 at 4%, and the remainder at 5%. His income was \$120 annually. How much did he inherit? 6. When the selling price and gain or loss per cent. are given, how do you find the cost? 7. At the rate of $2\frac{3}{4}$ miles per hour, how many minutes will it take to walk around a square field containing 15% acres? 8. What is a man's tax whose farm valued at \$4,200, is taxed at $\frac{2}{3}$ of its value at 15 mills on the dollar? 9. The rotunda of the capital at Columbus is circular in form and is about $64\frac{1}{2}$ feet in diameter. Find the cost of a marble floor at 75 cents a square foot. 10. A cow gave 12 pints of milk each evening and 10 pints each morning in the month of March. How many gallons of milk did she yield? If a pint of milk weighs a pound, and the milk tests 3.9% butter fat, how many pounds of butter were produced?

GRAMMAR.

"The night is mother of the day,
The winter of the spring;
And even upon old decay
The greenest mosses cling.
Behind the clouds the starlight lurks,
Through showers the sunbeams fall;
For God, who loveth all His works,
Has left His hope with all."

—J. G. Whittier.

1. Name the nouns in the first four lines, stating which are in the nominative case and which are in the objective case. 2. Select two verbs and parse them in full. 3. Name the adjectives and tell to which class each belongs. (Give each adjective but once.) 4. (a) Write the plurals of these nouns: Father-in-law, hero, money, city, calf. (b) Write the possessive plural of these: Man, child, farmer, ox, lady. 5. (a) How is each of the following formed: Passive voice, progressive form. (b) Write a sentence containing an adjective clause. 6 Conjugate the verb go (a) in the past perfect tense, indicative mode; (b) in the present tense, subjunctive mode. 7. Write a letter to a former teacher describing your school work and giving details about the subjects you like. 8. Tell in your own words what you understand by the above quotation.

Note.—General appearance of manuscript, use of capital letters, and punctuation will be considered in grading this subject.

GEOGRAPHY.

1. Define latitude and longitude. About what is the longitude of your home? 2. Define each of these: Archipelago, mountain, plateau, equator, pole. 3. What natural causes influence the growth of a city. Name a city which illustrates your answer. 4. Name five Ohio exports and five imports. 5. Name a state of the United States that excels in the production of sugar; one that excels in the production of corn; one that excels in cotton. 6. Locate each of these: Sitka, Honolulu, Galveston, Cape Town, Madrid. 7. Name three important countries of South America. Give the chief city and form of government of each. 8. Why do we have change of seasons? Answer briefly. 9. What relation exists between the climate of a country and the occupations of its people? 10. Name four principal rivers and five chief cities in Ohio.

WRITING.

Write the following selections: The best and highest thing a man can do is to sow a seed, whether it be in the shape of a word, an act, or an acorn.—James Boyle O'Reilly.

If I could put my words in song
And tell what's there enjoyed,
All men would to my gardens throng,
And leave the cities void.

—Ralph Waldo Emerson.

ORTHOGRAPHY.

1. Give three uses of a dictionary. 2. Copy each of the following, using the correct word selected from the words in parenthesis: (a) We are never (two, to, too) old (two, to, too) learn. (b) The women were weeping and (wringing, ringing) (their, there) hands. (c) The (leaf, lief) supplies food for the (berry, bury). (d) Nearly (all, awl) the men able to (bare, bear) arms had (bin, been) (draft, draught) ed into service. 3. Indicate by the proper diacritic marks the sounds of the vowels in the following words: Aunt, fare, bird, grass, they. 4-10. Spell the following words, to be pronounced by the examiner: Necessary, cipher, lilies, sense, mischief, truly, lovely, loving, weight, expense, hundredths, commission, principal (chief), ankle, gastric, sneezing, pulse, muscle, New Hampshire, Havana, Dakota, comparative, loam, dairying, linen, shoulder, criminal, currency, supervisor, answer, duties, multiplicand, arteries, medicine, debt. (70 credits.)

Appendix No. 2.

BOXWELL-PATTERSON EXAMINATION, MAY 9, 1908.

UNITED STATES HISTORY INCLUDING CIVIL GOVERNMENT.

1. Write a short account of De Soto's explorations in America. 2. Name one Dutch, one French and one English discoverer or explorer of America, and tell what one of them did. 3. Give the name of a person prominently identified with the settlement of each of these states: Georgia, Maryland, Kentucky. 4. What historical events are suggested by the dates 1776 and 1789? What great question was decided in the time between these dates? 5. Give what facts you can in connection with the public life of Thomas Jefferson. 6. For what important invention are we indebted to Eli Whitney? Elias Howe? S. F. B. Morse? 7. What was the Missouri Compromise? When was it adopted? 8. What were the effects of the Emancipation Proclamation? By whom was it issued? 9. What service was rendered the United States by each of these persons: John Paul Jones, Henry Clay, Daniel Webster, U. S. Grant? 10. Name the three departments of the United States Government.

PHYSIOLOGY.

1. What provision is made in the bones to secure lightness? 2. Describe the lungs as to position and the work they perform. 3. Define stimulant. Define narcotic. 4. Give hygienic reasons for breathing through the nostrils rather than through the mouth. 5. Through what does the blood flow in its passage from the right ventricle to the left auricle? 6. In the process of digestion, what is the work of the saliva? Of the gastric juice? 7. What and where is the diaphragm? On which side of the body does the stomach lie mainly? 8. What are the two great divisions of the nervous system? 9. Name two poisons and give an

antidote for each. 10. Locate each of these: Larynx, cornua, and tympanum.

GRAMMAR.

1. Write the following, using capitals and marks of punctuation where they should appear: president mc-kinley was shot friday sept 6 1901 he died saturday sept 14, 1901. i dont like to study english grammar i write correctly enough. 2. Define the following terms used in grammar: Case, tense, voice, conjunction. 3. What is the difference between an adjective and an adverb? Illustrate your answer by short sentences or expressions. 4. Compare these words: Good, heavy, soon. Give the plural of these words: City, woman, this. 5. Write four pronouns used in the nominative case only, and four used in the objective case only. 6. Give the past tense of the following verbs: Teach, swim, choose, sit, set, see, lie (to recline), wear. 7. What part of speech is each word in the following sentence: The great procession which was passing was carefully watched by him. 8. Write a simple sentence containing an adjective phrase, a complex sentence, and a compound sentence. 9-10. Write a letter to your teacher giving an account of your plans for next year.

READING.

Examiners will conduct an oral examination in reading

ARITHMETIC.

1. Multiply 90 thousandths by 8 hundred and divide the product by 144 millionths. 2. Find the cost of 20 miles of wire at 35 cents a pound, supposing that 1 pound stretches 50 feet. 3. How do you change a common fraction to a decimal? A decimal to a common fraction? Illustrate each. 4. How many rods long is the side of a square field containing 40 acres? 5. Having lost $12\frac{1}{2}\%$ of his capital, a man had \$10,850 left. How much did he lose? 6. Find the exact interest on \$200 at 7% per annum from January 2, 1908, to March 15, 1908 (365 days to the year). 7. After peeling 8 pounds 4 ounces of potatoes, it was found that the peeling weighed two pounds and twelve ounces. What per

cent. was lost? 8. Three men rented an automobile for \$140. One man used it one day a week, another two days a week, and the third four days a week. How much of the rental should each pay? 9. How is the area of a sphere found from its radius? How do you find the volume of a cylinder? 10. What must be the depth of a cubical bin which contains as many bushels of wheat as another 32 feet long, $2\frac{1}{2}$ feet wide, and 6 feet deep?

GEOGRAPHY.

1. Explain the following terms: Equator, tropic, strait, glacier. 2. Name and locate five of the leading manufacturing cities of the United States. 3. Name two countries where each of the following is produced: Iron, gold, coffee, tea, sugar. 4. What part of Ohio produces large quantities of coal; of petroleum; of natural gas? 5. Name four important countries of Europe. Give the chief city and form of government of each. 6. What and where is each of these: Honolulu, Amazon, Key West, Korea, Sahara? 7. How does Australia compare in size with the United States? To whom does Australia belong? 8. What is the greatest latitude a place may have? What is the latitude of your home? 9. When are our days and nights of equal length? 10. Draw an outline map of your country, showing thereon the principal cities or villages, and important water courses.

WRITING.

Copy the following quotations in your best hand-writing: "The talent of success is nothing more than doing what you can do well, and doing well whatever you do, without a thought of fame." "I pledge allegiance to my flag and to the Republic for which it stands; one country indivisible, with liberty and justice for all."

ORTHOGRAPHY.

1. Make and give the names of five marks used to indicate the sounds of vowels. (10 credits.) 2. Give the meaning of the following prefixes and suffixes: **Less, er,**

able, semi, dis. (10 credits.) 3. Write sentences containing these words: Cell, sell; clime, climb; wring, ring. (10 credits.) 4-10. Spell the following words: Divisor, subtrahend, transition, archipelago, rye, Mediterranean, Caucasian, caterpillar, promiscuous, sphere, cylinder, biscuit, capital letter, nominative, capillaries, chloroform, corpuscles, humerus, supreme, preparation, prairie, Gibraltar, annual, Massachusetts, currants, raspberries, Luther Burbank, extremes, Missouri, secede, chestnut, separate, imperative, ecliptic, parallel. (70 credits.)

Appendix No. 3.

BOXWELL-PATTERSON EXAMINATIONS, MAY 8, 1909.

ORTHOGRAPHY.

1. Give the proper abbreviations for the following: Account, doctor, debtor, junior, the present month. 2. Mention five common prefixes and illustrate the same in words. 3. Indicate by diacritical marks two sounds each of c, g, s and o. 4-10. Spell the following words to be pronounced by the examiner: Privilege, antecedent, allege, mischievous, caterpillar, Glasgow, Chicago, parallel, Greenwich, herring, salmon, anthracite, screen, Yankee, definitely, dense, extreme, pension, burr, axle, tedder, poplar, hickory, trolley, grosbeak, stalk, Percheron, currycomb, suet, sirloin, gingham, gourd, genial, sulphur, chloroform. (The examiner will define any word that may not be clear to the applicant.)

UNITED STATES HISTORY.

1. Give the dates of the following: The landing of the Pilgrims, the birth of Washington, the battle of Bunker Hill, Lee's surrender. 2. (a) Give three important facts concerning Henry Hudson's voyages. (b) For whom was Virginia named? 3. How did William Penn get Pennsylvania? What city did he found? 4. Give briefly the causes of the American Revolution, period of time covered and terms of treaty that ended the war. 5. What celebrated document was drawn up by Thomas Jefferson? What was the most important event of his term as President? 6. For what is each of the following noted: Daniel Boone, Robert Fulton, Winfield Scott, Daniel Webster, John Brown? 7. What is the meaning of slavery? Mention five states in which slavery existed in 1860. 8. When Texas wished to join the Union, how did the people of the North feel? Those of the South? What trouble resulted? 9. How long did the Civil War last? Name four able generals in the Union army; four in the Confederate army. 10. What are

the necessary qualifications of a voter in Ohio? On what question is woman entitled to vote in Ohio?

PHYSIOLOGY.

1. What is meant by each of the following: Oxygen, saliva, tendon, abdomen, iris? 2. Name and locate ten bones of the trunk. 3. What is meant by the nervous system? Name the chief parts of this system. 4. Describe somewhat fully one of the following: The heart, the eye, the ear. 5. What is a sprain? How should it be treated? 6. What is impure air? Tell how it acts on the brain. 7. What foods are digested by the gastric juice? What foods are digested in the intestines? 8. Give two reasons why foods are usually cooked. 9. How do you distinguish by the flow of blood whether an injury affects a vein, an artery or the capillaries? 10. How does alcohol produce the drunkard's red nose?

WRITING.

Copy the following in your best handwriting:

"'Tis the rule of the land, that, when travelers meet,
In highway or byway, in alley or street,
On foot or in wagons, by day or by night,
Each favor the other and turn to the right."

"First in war, first in peace and first in the hearts of his countrymen, he was second to none in the humble and endearing scenes of private life. Pious, just, humane, temperate, and sincere; uniform, dignified and commanding, his example was as edifying to all around him as were the effects of that example lasting."—Lee.

GRAMMAR.

1. Analyze or diagram the following sentence: "When Duty whispers low, 'Thou must,' the Youth replies, 'I can.'" —Emerson. 2. Referring to Question 1, compare "low;" decline "thou;" give the mode of "must." 3. How many and what kinds of clauses are there in the sentence in Question 1? 4. Explain the use of quotation marks in Question 1. Place quotation marks and punctuate correctly the following sentence: Doesn't it seem good she asked to be

back in the old home 5. What is a phrase? Write one sentence containing two different kinds of phrases. 6. With reference to manner, what kind of an adverb is "low" in Question 1? Show in a sentence of your own construction that you understand the use of a conjunctive adverb. 7. How is the passive voice formed? Has "whispers" in Question 1 a passive voice? Why or why not? 8. Give the gender and number of each of the following nouns: Hens, business, cattle, gander, Jesse. 9. Give the mode and tense of the verbs in the following sentence: A popular teacher has said, "Boys, never be afraid to face the consequences of a righteous act." 10. Write a short letter to a business firm ordering some useful articles you have seen advertised in a magazine.

ARITHMETIC.

1. Define abstract number, multiple of a number, root, face of a note. 2. Simplify and express decimally the following:

$$\frac{(3\frac{1}{3} - 2\frac{1}{2}) \div \frac{5}{6} \text{ of } \frac{3}{8}}{2\frac{2}{3} \div (\frac{1}{2} + \frac{1}{4})}$$

3. To fence a square lot at \$2.00 a rod costs \$120.00. What is the land worth at \$1600 an acre? 4. A man owns 100 acres of coal land, the coal being $4\frac{1}{2}$ feet thick. Allowing 35 cubic feet to the ton, how many tons of coal in the farm? 5. If the cost of feeding 75 hens for 7 weeks is \$10.50, what will it cost to feed 40 hens for 9 weeks? Solve by analysis or proportion. 6. A farmer sold 132 bushels, three pecks, of wheat, which was 45 per cent. of his crop. How many bushels did he have left? 7. A farmer bought 12 head of cattle at \$45 each on December 1, 1908, giving his promissory note at 6 per cent. He paid the note April 24, 1909. What was the amount of the principal and interest? 8. A schoolhouse costing \$9600 is to be built in a township whose property is valued at \$1,900,000 the house to be paid for in ten years. Find the rate of taxation. 9. What is the difference in dollars between a discount of 50 per cent. on \$800 and two discounts of 25 per cent. and 25 per cent.? 10. A square lot has an area of 169 square rods. How far

is it around the lot? How far is it around a lot four times this area?

GEOGRAPHY.

1. Indicate on your paper a hemisphere and mark thereon the width of the zones. 2. Describe two of the principal ocean currents. Tell what effect they have on climate. 3. What conditions of heat and moisture favor the coffee plant? Mention three leading coffee producing areas. 4. Locate and state the importance of five of the following: Pittsburg, Sheffield, New Orleans, Havre, Seattle, Tokio, Madras, Liverpool. 5. Name three outlying dependencies of the United States. Of what importance is each? 6. What advantage does Europe derive from the Suez canal? 7. Describe a continuous practical route from New York to Manila. 8. Draw a map of your county and indicate on it the township in which you live. 9. State the purposes and destination of Theodore Roosevelt's foreign trip. 10. Define each of the following: Delta, crater, isthmus, orbit.

READING.

Examiners will conduct an oral examination in reading.

Appendix No. 4.

BOXWELL-PATTERSON EXAMINATIONS, APRIL 17,
1909.

ORTHOGRAPHY.

1. For what do you use a dictionary? Name a good one.
2. Copy the following sentences, using the correct word selected from the words in parenthesis: (a) A (vale, veil) of mist enveloped the mountain. (b) Members of the cat tribe (clime, climb) by means of their (claws, clause). (c) His (style, stile) in (right, rite, write, wright) ing was excellent.
3. Indicate by the use of the proper diacritical marks the sound of the vowels in the following words: Arc, fur, more, food, last.
- 4-10. Spell the following words to be pronounced by the examiner: Business, commerce, blizzard, grievous, chalk, separate, genuine, difference, unnatural, colonel, auxiliary, patella, epidermis, nasal, Buchanan, Roosevelt, biology, Himalaya, Sweden, Shiloh, monitor, vein, wholly, ascent (motion upward), complete, believing, Missouri, misspell, currant (a berry), circle, domicile, governor, controller, inauguration, monosyllable. (70 credits.)

READING.

Examiners will conduct an oral examination in reading.

GRAMMAR.

1. Define language, word, grammar, sentence, appositive.
2. Give examples showing how sentences are classified (a) in regard to meaning; (b) in regard to form.
3. Use a word in a sentence as an adjective. Expand the adjective into an equivalent phrase. Expand the phrase into an equivalent clause.
4. Use in sentences and name each of the following: (a) A collective noun, (b) a relative pronoun, (c) a descriptive adjective, (d) an adverb of degree, (e) a present participle.
5. Give the synopsis, first person singular, of the verb "see" in all the tenses of the indicative mode, active voice.
6. (a) Write the possessive, singular

and plural, of each of these words: Child, deer, wolf, fly, turkey. (b) Compare the following: Fine, worthy, thin, splendid, much. 7. Name the part of speech of each word in the following: We believe that truth has never changed the beginning of creation. 8. Write with proper reference to capitals and punctuation: the teacher quietly turned to the class and remarked you see children I have placed on the board a stanza for you to learn.

in learning proudly said the birch
i once played quite a part
whenever little boys were dull
why I could make them smart

UNITED STATES HISTORY, INCLUDING CIVIL GOVERNMENT.

1. Who were the Cabots? From what country did they sail? Tell what they discovered. 2. Tell the story of Ponce de Leon; of De Soto. 3. What two companies were formed in England in the early part of the seventeenth century for the purpose of colonizing America? Tell briefly what was done by each. 4. Tell something about each of the following: King Philip, Father Marquette, General Oglethorpe. 5. Why did the colonists claim that Parliament had no right to tax them? What was the Stamp Act? 6. Name five important men connected with the American Revolution and tell for what each is noted. 7. When were railroads first built in America? Tell the story of the invention of the telegraph, or of the laying of the telegraphic cable under the ocean. 8. Why did the people of the South wish to leave the Union in 1861? How many states seceded? What name did the seceding states take? 9. Mention three great surrenders that were made to General Grant during the Civil War, and give an important result of each surrender. 10. What does the Constitution say in regard to the election of members of the House of Representatives?

WRITING.

Copy the following in your best handwriting: "True glory consists in doing what deserves to be written, in

writing what deserves to be read, and so living as to make the world happier and better for our living in it."

Truth, crushed to earth, shall rise again;
Th' eternal years of God are hers;
But Error, wounded, writhes in pain,
And dies among his worshippers.—Bryant.

GEOGRAPHY.

1. Define the following terms: Orbit, meridian, continent, isthmus, delta. 2. What conditions determine (a) the climate of a country, (b) the occupations of men? 3. Mention three kinds of government and tell which kind is found in each of the following: United States, Japan, France, Russia, England. 4. Write a paragraph on the Panama canal. 5. Name and locate ten of the world's leading seaports. 6. Mention five countries, two rivers and three cities of South America. 7. Take an imaginary trip across the United States. Name in their order the states through which you would pass and the important cities you would see. 8. Name five products the people of the United States send to other countries and name the country to which each is sent. 9. Of what interest to the American government are the following: Cuba, Porto Rico, Hawaii, Panama? 10. Draw a map of Ohio. Locate thereon your county seat, five important cities, and three important rivers.

PHYSIOLOGY.

1. Name five organs of the body and state a function of each. 2. State the difference between veins and arteries. 3. Describe the ribs as to shape, arrangement, number, attachment. 4. Describe the structure of the teeth. In the care of the teeth what should be observed? What should be avoided? 5. What are the effects of impure air upon the system? 6. Illustrate by diagram the circulation of the blood, showing the two systems of circulation. 7. What is the use of respiration? Explain. 8. What is each of the following: Retina, esophagus, cerebrum, pericardium, diaphragm. 9. Apply these adjectives to the correct nouns:

Flexor, vitreous, hepatic, pulmonary, mitral. 10. Name the digestive fluids and state the office of each.

ARITHMETIC.

1. Find the amount of the following bill, retaining all fractions: 300 pounds of sugar at $4\frac{3}{4}$ cents a pound; 1 dozen and 10 eggs at 32 cents a dozen; $\frac{3}{4}$ dozen knives and forks at \$2.50 a dozen; $12\frac{1}{2}$ yards of toweling at $12\frac{1}{2}$ cents a yard. 2. Taking the two numbers 445.3 and .073, find (a) their sum, (b) their difference, (c) their product, (d) the quotient of the first divided by the second. ($2\frac{1}{2}$ credits for each part.) 3. A field is a half mile long and a quarter of a mile wide. If two and one-fourth acres are plowed each day, how many days will be required to plow it? 4. Having the radius of a circle, how can you find the area of the circle? Having the dimensions of a joist, how do you find the number of board feet it contains? 5. A house and lot are worth \$3500. The house is worth six times as much as the lot; find the value of each. 6. Find the simple interest on \$2347.50 for three years, six months and fifteen days at $4\frac{1}{2}$ per cent. per annum. 7. There are 40 pupils in a class, and each needs a ruler and drawing compasses. The price of the rulers is \$0.35 per dozen net, and of the compasses \$1.65 per dozen, less 10 per cent. and 5 per cent. What will the supplies cost the school? 8. The floor of a room is square and contains 144 square feet. The room contains 1368 cubic feet. Find the three dimensions of the room. 9. (a) A boy was present 304 half days during the school year, which contained 320 half days. What was his per cent. of attendance? (b) In the same school a girl attended 313 half days. What was her per cent. of attendance? 10. The center pole of a circus tent is 35 feet high, and a guy rope is stretched from the top of the pole to a stake 56 feet from the bottom. How long is the rope, supposing the ground level and the rope straight, allowing four inches for tying?

Appendix No. 5.

BOXWELL-PATTERSON EXAMINATIONS, APRIL 16,
1910.

UNITED STATES HISTORY INCLUDING CIVIL GOVERNMENT.

1. Describe the early settlement of Ohio. 2. Who were the inhabitants of Ohio before the whites? Write about their manner of living. 3. Who is our Governor? What are his duties? What are the duties of any of our county officials? 4. Name the important wars in America before the Revolution. Give causes and results of one of them. What were the terms of the treaty that closed this war? 5. What is the Declaration of Independence? What is the Constitution? When was each adopted? Where? By whom? 6. Give an event in the life of each of the following men: W. T. Sherman, James Russell Lowell, Rutherford B. Hayes, Capt. John Smith, Jacques Marquette, Robert Fulton, Marquis De Lafayette, and Admiral George Dewey. 7. Define history, rebellion, war, statesman, civil government, congress, treasurer. 8. Outline the administration of any president since the Civil war. What were the chief events of his term of office?

ARITHMETIC.

1. What is a fraction? A note? Interest? A decimal fraction? A circle? 2. Smith and Oaks load 37 cars with 1,056,600 lb. of soap; allowing 64 lbs. to the box, how many boxes did it take? 3. Simplify: $(9\frac{1}{2} \times 737) \div 3.5 = ?$ If $\frac{4}{5}$ of a number is 20.256, what is the whole number? 4. Find the L. C. M. of 2, 6, 8, 12, 18, 40, 63 and 128. 5. How many square feet of zinc will be needed to line the five sides of an open cubical tank containing 1728 cubic feet? 6. Find the interest on a note of \$675 given July 1, 1906, drawing 6% interest and due the day you are taking this examination. 7. Add 2358, 3165, 16395, 406, 2749, 428690, 3174, 4528, 53185, 4749 and divide the sum by 128. 8. How many yards

of cloth at \$1 $\frac{7}{8}$ per yard, will I receive in exchange for 8 bu. 2 pks. 5 qts. 1 pt. of plums at \$2.50 per bushel?

GEOGRAPHY.

1. Draw an outline map of the United States showing five rivers, ten cities, two mountain ranges, two mountain peaks, and a great battlefield. 2. Name the important exports of Ohio; name the most important manufactured products of our state; give the area and population of Ohio. 3. Locate three largest rivers of Europe and a city upon each one; name the products of the valley of each river. 4. What is the capital of Brazil? Of India? Of Sweden? Of Egypt? Of Panama? 5. Give the principal physical features of Siberia; of Australia. What are the occupations of the people of each of these countries? 6. Locate and tell what is Hawaii; Valparaiso; Dallas; Ganges; Aleutians; Gibraltar; Yangtze; Sahara; Algiers; Sumatra. 7. If you made a trip to each of the following places, what products would you expect to buy in quantities: Cape-town? Seattle? St. Petersburg? Manilla? Odessa? 8. What kind of government and religion has Greece? Brazil? Canada? Japan? Egypt?

GRAMMAR.

1. What is the subject of a sentence? Write a sentence with a noun for the subject. Write another sentence with a clause for the subject. 2. Write the singular and plural possessive forms of ox, pupil, Ohio, calf, he, sky, brother. 3. Write a memory gem either prose or poetry of at least six lines. (Observe the rules of punctuation, spelling, capitalization, etc.) 4. Define transitive verb and passive voice. Show each of these in sentences. 5. Write a letter to a newspaper answering an advertisement that called for applicants for a position of clerk in a store to work after school hours and on Saturdays. 6. Define adjective and the different kinds of adjectives. Write sentences showing these adjectives in their proper uses. 7. What is a pronoun? Decline I, thou, she, it, he and who. 8. Analyze, or diagram: "They are never alone that" are accompanied

with noble thoughts. Parse, or give the construction of the words enclosed in quotations.

PHYSIOLOGY.

1. Name and locate three vital organs of the body. Give the functions of each. 2. What is the use of the outer ear? How protect the inner ear? How do we endanger our good hearing sometimes? 3. What is excretion? What are its uses? Name two organs of excretion. 4. Describe the composition of the blood. What are the chief functions of the blood? 5. What can you say of the motions of the heart? Of the eye lids? 6. What foods and drinks are best for young people? Name some drinks very harmful. Name some foods that may do harm. 7. What is the portal circulation? Mastication? A pulsation? The periosteum? Absorption? 8. Give the uses of the nervous system. Of the cerebellum. Of sleep. How do alcoholics and narcotics hurt or hinder either of these?

ORTHOGRAPHY.

1. What is a vowel? A syllable? Pronunciation? 2. Show the different sounds of C and G in words properly marked. 3. Define silent letter, consonant, accent, polysyllable, and primitive word. 4. Mark these words with the proper diacritical markings: Nasal, cartilage, Brazil, merciful, Tecumseh, watch, humid, Cuyahoga, valise, verify. 5. Spell: Alluvial, glaciers, delve, varies, chrysanthemum, Mohican, deity, tread, prophecy, secrecy, precede, abbeys, fireplace, frigid, fertile, apology, plenteous, trophy, Porto Rico.

WRITING.

Write a stanza of poetry not to exceed four lines in length as a sample of your penmanship.

READING.

Examiners will conduct the examination on this subject orally.

Appendix No. 6.

BOXWELL-PATTERSON EXAMINATIONS, MAY 21, 1910. GEOGRAPHY.

1. Draw an outline map of Ohio showing your own county and a few others, five cities, five rivers, and such other localities as you think will help to make a good map. 2. What kind of government has Cuba? Hawaii? District of Columbia? Switzerland? Egypt? Chili? Scotland? The Philippines? Name an important city of each of these. 3. Bound any three states west of the Mississippi river together as a group. Name the capital of each of them and the products. 4. What is longitude? Latitude? How is each of these measured? What is Standard Time? 5. Name the seas on the coast of Asia. Name a city on each. 6. If you were to sail from New York with a cargo, what would you take with you to sell in St. Petersburg? What would you be able to get for your New York cargo that would be taken in exchange for it? Suppose you make the same kind of a trip between New York and Hong Kong, what articles would you exchange? 7. Give the principle physical features of Canada. What can you say of the government? Why are so many immigrating to Canada? 8. Compare California and Ohio in size, location, products and climate. 9. Name ten very large cities of Europe. For what is each of these noted? Where are they located? 10. Describe one of the following in not less than eight lines: Panama Canal, Washington, D. C., the Nile River, or Pekin.

ARITHMETIC.

1. Write the table by which we buy cloth. The table by which we buy land. The table by which we buy vinegar. The table by which we measure time.

2. Solve:
$$\left(\frac{7}{8} \text{ of } \frac{2}{3\frac{1}{2}}\right) \times (1\frac{1}{2} + 1\frac{2}{3}) = \text{what?}$$

3. At \$75.50 per acre, what will the land cost in a field 48 rods long and 37.5 rods wide? 4. (This problem must be solved correctly in every way to merit any grade.) Add 732, 1593, 206. 39578, 1840, 453, 173946, 37506, 13549, 965, 746.

and multiply the sum by 279. 5. What do I really pay for goods listed at \$432, if I get discounts of $12\frac{1}{2}$ and $33\frac{1}{3}$ per cent? 6-7. A man bought an automobile worth \$1500 at a discount of 20 per cent. After using it one season he sold it for 15 per cent less than he paid for it. What was his loss? If he had sold it for \$13000, what per cent would he have gained or lost? 8. A bin is 8 ft. 6 in. long, 5 ft. 4 in. wide, and 4 ft. deep. What is the wheat in it worth at 98 cents a bushel? 9-10. Mr. Davis sold a farm for \$12,400; he took a note for 1 yr. 3 mo. drawing interest at 8 per cent. The man who bought the farm paid the note when due and Mr. Davis purchased another farm at \$110 per acre with the money. In a few days he sold this farm for \$120 per acre; what per cent did he gain or lose?

PHYSIOLOGY.

1. Describe a bone. Give the uses of the skeleton. 2. What would you do if a playmate in a game with you would suffer a broken arm? What would you do if he were to cut himself severely? 3. Give specific directions for caring for the teeth. For the nails. For the ears. 4. What is digestion? Toothache? Indigestion? Gastric juice? Ventilation? 5. Make a drawing of the eye; name and give the uses of five different parts of it. 6. What are the uses of the power to taste? To smell? To talk? To think? Explain fully how any one of these is done. 7. Name three different kinds of joints. Why these different kinds? What injuries may happen to a joint? How treat such an injury? 8. What is the chief function of the skin? Of the pleura? Of the heart? Of the arteries? Of the eyelash? 9. How preserve your good eyesight? How improve your breathing? How may we injure our digestion? How may we improve our digestive powers? 10. Name the divisions of the brain and give the functions of each.

UNITED STATES HISTORY INCLUDING CIVIL GOVERNMENT.

1. Why should we remember July 4th? February 22d? February 12th? September 10, 1813? The year 1803? Describe an event in connection with one of these dates. 2.

Write the preamble to our National Constitution. Give the term, duties and salary of our President. 3. Who is a judge? A justice of the peace? A county commissioner? A county examiner? Name one each of these officials. 4. Describe the settlement of Pennsylvania. Name as many very important events that occurred within this state as you can. Give the dates of these events. 5. Give the causes and results of the Civil War. Name three great men on each side in this war who were soldiers; three on each side who were prominent and yet were not soldiers. In what ways were these last three men prominent? 6. Write a biography of one of the following men: Robert Fulton, Henry Clay, James Oglethorpe, Nathaniel Hawthorne, Cyrus W. Field, Sam Houston, or John Quincy Adams. 7. What books upon the subjects found in history have you read besides the regular text-book of your school? In what other writings or printed matter may you learn of historical events? Write about one of the following men: W. H. Taft, Robert E. Peary, "Mark Twain," or any good man who has lived or now lives in your county. 8. What do you regard as the greatest event of the period of the Civil War? Of the administration of Andrew Jackson? Of the last ten years of our history? Write about one of the events that you have named. 9. Name three great statesmen who lived before the time of Buchanan's administration. Name four of the president's cabinet at the present time. Give the duties of one of them. 10. Give three facts concerning the Louisiana Purchase. Two facts concerning the acquisition of the territory of Alaska. Three events that have occurred in the last five years.

GRAMMAR.

1. Name at least five kinds of sentences. Write an example of each kind that you have named. 2. Why or when use a comma? A period? An exclamation point? A colon? Quotation marks? Write a sentence using the quotation marks properly. 3. Give the principal parts of awake, come, see, receive, grind, forsake, draw, eat, shake, sow. Write the past tense forms of these words in sentences. 4. Write

the synopsis of one of the words in the third question in the indicative and subjunctive modes. 5. (a) Write a sentence containing an adverbial element. (b) Another sentence containing a clause as an adjective element. (c) Another sentence containing a clause used as a noun. 6. Outline the conjunctions and give an example of each kind that you use in sentences. 7. Write a letter to a friend in Cincinnati describing your trip to the examination this morning; in this letter write carefully about some special thing that you saw or that may be seen on the way to the city in which you are taking the examination. 8. Define comparison. Name the different degrees of comparison. Compare, far, bad, little, much, narrow, precious. 9-10. Diagram, or analyze, and pare the words in bold face type:

Where beams of warm imagination play
The memory's soft figures melt away.

READING.

Examiners will conduct this examination in oral reading.

WRITING.

Write four lines of poetry. The regularity of the letters and the legibility of the writing will be graded.

ORTHOGRAPHY.

1. Mark these words showing the proper pronunciation: Halloo, iceberg, surface, leisure, precinct, portico, exile, Gibraltar, corral, busy. 2. Show the different sounds of E in words properly marked. 3. What is a letter? An elementary sound? Accent? A primitive word? Voice? 4. Define suffix and prefix. Give three examples of each. 5. Give five letters that never have diacritical marks. 6-10. Swell: Bonfire, cancellation, mustard, treasurer, calyx, canoes, machinery, civilized, camphor, haughty, preferable, quinsy, dairy, indelible, carriage, crescent, glacial, regatta, populace, brakeman, a lady's veil, a boy's sleigh, accomplice, deceit, veracity.

Appendix No. 7.

BOXWELL-PATTERSON EXAMINATIONS, MAY 20,
1911.

ARITHMETIC.

(Pupils will select any eight.)

1. Add 647, 8894, 4762810, 409, 2831 and 7639, multiply the sum by 79 and divide the product by 401. (Must be absolutely correct to receive any credit.) 2. If $\frac{4}{5}$ of a farm contains 120 acres, what is the whole farm worth at $\$126\frac{2}{3}$ per acre? 3. If I buy 12 bu. 3 pk. of berries at \$3.20 per bu. and sell them so as to make 25% on them, what do I receive for them? 4. (a) From 15.006 take 325 thousandths and multiply the remainder by 375 tenths. (b) Reduce .67625 to a common fraction of the lowest terms. 5. A field is 45 rods long and 32 rods wide; what is the land worth at $\$133\frac{1}{3}$ per acre? What will it cost to fence it at \$1.80 per rod? 6. How many feet in a mile? How many rods in a mile? How many acres in a section? How many inches in a yard? How many diagonals in a square? 7. A note of \$216 was given November 18, 1910, drawing interest at 5 per cent. What was the amount paid if it was settled on the 18th of this month? 8. Find the sum of $\frac{2}{3}$, $\frac{3}{5}$, $\frac{13}{15}$ and $\frac{5}{24}$; divide this sum by $3\frac{13}{60}$. 9. What is a fraction? An improper fraction? A decimal fraction? The greatest common divisor? The terms of a fraction? A complex fraction? Show how you divide one fraction by another. 10. A farmer sent 800 bushels of corn to a Cincinnati commission agent who sold the same for 40 cents a bushel. He retailed 4% as commission and bought wire fence for the farmer at \$1.10 per rod for the remainder of the money received for the corn. How many rods of fence did he buy?

UNITED STATES HISTORY, INCLUDING CIVIL GOVERNMENT.

1. Who is or was Samuel F. B. Morse? King Phillip? "Champ" Clark? George Rogers Clark? John C. Calhoun?

Describe an event in the life of one of these men. 2. Write what you can of the annexation and admission of Texas. 3. Describe the settlement of Pennsylvania. For what is this state especially noted at this time? 4. How may a bill become a law? How does a cabinet officer get his position? 5. Name some of the great general improvements that our national government has undertaken and performed. Describe one in its early history. 6. Tell briefly of the ocean cables; of the part that the United States has in the Philippine Islands. 7. Give the causes and results of the Mexican war. How did this affect the extent of the territory of our own country? In what particulars was that war a benefit to us of today? 8. Write from memory any section of the Constitution or any paragraph of the Declaration of Independence.

WRITING.

1. Make the capital letters. (20%.) 2. Write not over four nor less than two lines of some quotation as a sample of your penmanship.

ORTHOGRAPHY.

1. Mark the following words diacritically: deceive, imitation, chisel, hyphen, creature. 2. Show all the sounds of "u" in words properly marked. 3. Define liberate, wealth, constitution, motorcycle, tedder, fertilize. 4. Abbreviate these words: Oregon, Doctor, In the Year of Our Lord, Esquire, Member of Congress, Thomas, Postmaster, Ounce, Forenoon, Colonel. 5. Spell: Insincere, arson, react, filter, pitied, guide, cavern, herald, trough, sheaths, conceal, laundry, disguise, studio, moth, cheapen, resume, subside, propel, Puget Sound, cohesion, pineries, hazard, paradise, wettest, profile, allspice, pursue, patriot, decimal. (60%.)

GRAMMAR.

(Pupil will select any eight questions from this list.)

1. Diagram this sentence: "Listen to Ruskin's description of the sea, and you think he must have spent his days and years in watching the beauty of its garlanded summer

waves and the tortured writhing of its wintry billows." 2. Parse the words in bold face in the first question. 3. Write a short letter to a friend regretting that you cannot accept an invitation to go on an excursion with him or her. 4. Write the synopsis of the verb "write" in the third person, masculine gender. 5. Classify the adjective and give examples of each class and kind in each class. Define each degree of comparison and give examples. 6. What is a participle? A common noun? A transitive verb? Give examples of each in sentences. 7. Write **who**, **which**, **what** and **whom** in simple interrogative sentences. Write these same words in sentences as relative pronouns. 8. Write explicit directions to a stranger telling him how to reach the place of this examination from your home. (Language, form, spelling, punctuation, etc., to be graded.) 9. Give the principal parts of the following verbs and write each form in a sentence: arise, work, see, set, and lay. 10. Write a memory gem of not less than six lines. Give a short biography of the author.

PHYSIOLOGY.

1. Define muscle, nerve, food, digestion, gland, epidermis, artery, spinal chord. 2. How should we sit in studying? Why? How should we walk? How should we eat our food? 3. What do the muscles do for us? How are they made healthy and strong? How injured? 4. Make a drawing of the heart and show its divisions. Give the uses of the heart. 5. Give the bad effects of alcohol; of tobacco; of poor digestion. 6. What does nutrition include? What foods are unwholesome? What food principles in milk? In meats? In bread? In potatoes? 7. Name some very common diseases and tell how we may prevent them. Name a poison that is liable to be taken in the home, and give its antidote. 8. Name the parts of the ear. Describe one of these parts. How may we injure the perfect working of the hearing? Then how care for the ear so as to prevent bad results?

GEOGRAPHY.

1. Draw a map of Europe showing the location of five ports, five capitals, five rivers, three islands and three agricultural districts. Name the products of the agricultural districts. 2. Name three counties in Ohio named for the Indians; five with names of noted men. Give the products of the counties along the Ohio River; along Lake Erie. 3. What is the climate of southern Alaska? Name its products. Being so far north, how do you account for the temperate climate here? What minerals are found in Alaska? 4. What is rain? Soil? Snow? A cloud? An isothermal line? A county seat. A cereal? A canal? A plateau? A tide? 5. Name two railroads of Ohio; name some large cities on each one. Name two leading railroads of the United States and some cities on them. Name some products carried both ways on each of these roads. 6 Write a paragraph upon one of these topics: "The Panama Canal," "The Alps," "The Great Chinese Wall," "The Nile Valley and Its Ruins," or "London." 7. Name four countries of South America and their capitals; name the products of each of these countries. Which of these products are sold in the United States? What products are shipped to these countries from the United States? 8. Name the chief trade cities of Asia. Name five leading countries of Asia and the capital of each. Locate two historic places in Asia and tell something of each of them.

READING.

1. What papers or magazines do you read? Name some articles that you have read recently. (10%.) 2. Who is our vice president? What caused the trouble in Mexico that we have been reading about for some time? Locate some interesting places in the world that you would like to visit and tell why you would like to visit them. 4-10. Read for the examiners.

Appendix No. 8.

BOXWELL-PATTERSON EXAMINATIONS, APRIL 15,
1911.

GRAMMAR.

(Pupils will select any nine questions.)

1. Define and illustrate two classes of verbs according to form. 2. Write sentences using correctly the following verb forms: did, written, broken, saw, spoken, seen. 3. Write a paragraph on one of these topics: "A Day in the County Seat," "An Imaginary Trip to Washington, D. C.," "The Best Book That I Read This Year," or "The Useful Metals of America." 4. Write from memory some standard poem. Who is the author? 5. What is meant by the principal parts of a verb? By the declension of a noun or pronoun? Illustrate. 6. Write the plural of knife, money, radius, landlord, hero, czar, son-in-law, salad, courthouse. 7. Write a sentence containing two subordinate clauses. Diagram it. Parse the verbs. 8. Write a business letter saying that some goods that you purchased do not come up to what you thought they ought to be and refuse them in a business way and request that the parties of whom you bought shall call for an interview upon the subject. 9. Define number, preposition, verb-phrase, comparison, conjunction, conjunctive adverb, modifier, note, letter, and the superscription of a letter. 10. What is a dictionary? What can you learn from a dictionary? How is it useful in the study of grammar? In the study of language work? In spelling?

ORTHOGRAPHY.

1. Make and name the diacritical marks. Give the uses of three of them. 2. Define automobile, treaty, reading, immense, civil government. 3. Into what classes are letters divided? Define each and give examples. 4. Give three rules for capital letters. 5. Write the abbreviations for honorable, doctor, gentlemen, Ohio, volume. 6. Mark the

accent and diacritics of America, distribute, superfluous, orange, dishonest, ratio, vacancy, governor, electrician, and library. 7, 8, 9, 10. Spell as the examiner pronounces: Aviator, vigil, Brazil, courtesy, tapestry, grieve, candor, reverie, Japanese, merino, sterile, dissent, refrigerator, justice, suffrage, peppermint.

GEOGRAPHY.

(Pupil will select any nine questions.)

1. Draw a map of Ohio and on it locate your home, five historic places, five rivers, ten cities, some coal mines, and three harbors either on the lake or the river. 2. Name five large and five small countries of Europe and the capital of each one and tell what kind of government each one has. 3. Explain the rapid growth of Chicago; of Cleveland; of the interest in the Philippine Islands. 4. What kind of climate west of the great mountain ranges of the western part of both North and South America? What are the products of these regions? 5. Name and locate the island possessions of the United States. What are the products of these islands? Name a city upon each group. 6. Locate the chief trade cities of Asia and give the exports and imports of each city. 7. What are the important railroads of Ohio? Trace a route of travel that you would take in going from your home to some foreign city. What might be some of the reasons for this trip? 8. Bound Spain; bound Russia; bound Africa. Tell something really interesting about each one of these countries or their people. 9. Locate the great cotton regions of the world; the great mineral regions; the wheat regions; the coffee regions; the sheep raising regions; the treeless regions. 10. Write a short composition upon any of the following topics: "Raising Corn," "The Amazon Valley," "The Reciprocity Trade of the United States With Canada," "The Panama Canal" or "Our National Congress and Its Work of the Last Year."

WRITING.

Write a short selection of poetry or prose from memory as a sample of your penmanship.

READING.

1. Name three books that you have read in addition to your regular school books. Tell something about one of these and its author. (20%.) 2. Who is President of the United States? Our Governor? Why is the United States building the Panama Canal? Name some events during this school year that have interested you. (15%.) 3. Read for the examiners. (65%.)

ARITHMETIC.

(Pupil may solve any nine problems.)

1. A field 32 rods by 21 rods yielded $46\frac{2}{3}$ bu. of corn per acre. What was it worth at $61\frac{1}{2}$ cents per bushel? 2. Add 184930, 590526, 78532, 751, 2638901, 6739, and 13607, multiply the sum by 29 and divide the product by 211. (Must be absolutely correct to receive credit.) 3. A note of \$115 was given August 1, 1910, drawing interest at 6%. What is the amount due April 15, 1911? 4. (a) Reduce .45625 to a common fraction of the lowest terms. (b) From 8 thousandths take 8 hundredth-thousandths, and divide the remainder by .2. 5. What will it cost to carpet a floor 27 by 16 feet with carpet $\frac{2}{3}$ of a yard wide at $87\frac{1}{2}$ cents per yard? 6. What part of a month is 5 days, 15 hours? 7. If ten men can dig a ditch 36 rods long, 2 feet deep in 8 days of 9 hours each, in how many days can twelve men dig a ditch 49 rods long and 3 feet deep if the days are only 8 hours long? 8. Illustrate least common multiple by a problem. Show in a practical problem how you make use of least common multiple. 9. At what price each must I sell oranges that cost 35 cents per dozen so as to gain 20 per cent on each one sold? 10. The difference between $\frac{2}{3}$ of A's money and $\frac{1}{4}$ of it is \$30. How much has he?

UNITED STATES HISTORY, INCLUDING CIVIL GOVERNMENT.

1. Who is or was Nathan Hale? Manasseh Cutler? Aaron Burr? Marconi? Gifford Pinchot? The Wright Brothers? 2. Write five or more lines about the adoption

of the National Constitution. Who were some of the leading men in the convention? 3. Describe the settlement of one of the following states: Ohio, Georgia, California, Kentucky, or New York. 4. Give the causes and results of the French and Indian war; its date and the leading men upon each side. 5. Who opposed the election of Lincoln as president? In what year? What other events in this same year? Describe one of these events. 6. What was included in the Northwest territory? What was the Ordinance of 1787? 7. What was the Monroe doctrine? The Missouri Compromise? 8. Write a short account of the close of the Civil War. What was the Reconstruction? 9. Name some great inventions that have improved our civilization. Name some great schools of learning that have influenced our national growth. What can you say of the value of the improved methods of travel in making a better people? 10. Name the important events of Washington's administration. Describe what you believe to be the most important event that you have named.

PHYSIOLOGY.

1. What are the uses of cooking and masticating the food? Name some different foods. What is digestion? How is it aided or hindered? 2. What is circulation? What are organs of circulation? What are the general uses of the blood? 3. What would you do for a playmate who in a game had broken his arm and no doctor was near? 4. Give the bad effects of alcohol; of cigarettes; of too much study and not enough physical exercise. 5. Enumerate some ways in which we injure our health. How remedy these? 6. How care for the teeth? For the eyes? What injury may we do to the ears? 7. Give the effects of breathing. Of over-exercising. Of a well of water situated where the drainage does not carry the waste water away from the well. 8. Define bone, muscle, disease, air, perspiration, tissue, retina, vein, digestion, and feeling.

Appendix No. 9

BOXWELL-PATTERSON EXAMINATION, APRIL 20, 1912.

READING.

The examination in reading will be conducted by the examiners.

HISTORY.

1. Write a short description of the French and Indian War and give the date of the beginning of the war. 2. What were the principal events of President Madison's administration? 3. Who was Benjamin Franklin? Citizen Genet? Eli Whitney? John Adams? James Monroe? 4. Name the last four presidents. 5. What were the causes of the war between the United States and Mexico? When did this war begin? 6. When was Andrew Johnson president of the United States? Why did congress oppose Johnson in his plans of reconstruction? 7. Give a brief description of Burgoyne's Expedition and surrender. 8. Who invented the telephone? The steamboat? The telegraph? 9. Name the thirteen original colonies. 10. Explain your understanding of the Monroe Doctrine.

GEOGRAPHY.

1. Name the four largest rivers of Ohio, and tell into what body of water each flows. (The Ohio river should not be named.) 2. What is a watershed; an isotherm; latitude; meridians; an iceberg? 3. Name the six largest rivers of the United States, and tell into what body of water each flows. 4. Name three great wheat states of the United States; three great corn states; three great cattle states; three great cotton states. 5. Locate the following cities: Liverpool, Paris, Bern, The Hague, and Berlin. 6.

Explain the advantages of having fields planted in grass, clover or wheat, rather than allowing the fields to be exposed during the winter. 7. Name three of the smallest and three of the largest states of the United States. 8. What countries or provinces of Canada border on the United States? 9. Name the Grand Divisions (continents) in order of their size, the largest first. 10. Name the townships of the county in which you live.

WRITING.

Copy the following quotations as a specimen of your best penmanship:

"I'll south with the sun and keep my clime;
My wing is king of the summer-time;
My breast to the sun his torch shall hold;
And I'll call down through the green and gold,
Time, take thy scythe, reap bliss for me,
Bestir thee under the orange-tree."

—From Tampa Robins, by Lanier.

PHYSIOLOGY.

1. How many bones are there in the human body? Name the bones of the skull. 2. Locate the following bones: Patella, ulna, clavicle, sternum, and scapula. 3. What are the milk teeth? Name the permanent teeth. 4. Name the organs of respiration. What is the chief work of the organs of respiration? 5. Define "the pulse," "corpuscles," "arteries," "phalanges," and "salivary glands." 6. What are the special senses? What is the sympathetic nervous system? 7. Explain the evil effects as the result of the use of tobacco. 8. Show the necessity of frequent bathing in order to have a healthy body.

ARITHMETIC.

1. Find the value of 3 T. 15 cwt. coal at $37\frac{1}{2}$ cents per hundred-weight. 2. How many pounds make one bushel of oats? Wheat? Irish potatoes? Timothy seed? 3. If $13\frac{3}{4}$

rods of fence cost \$4.25, find the cost of $16\frac{2}{3}$ rods. 4. If the areas of a rectangle is 128 sq. ft. and the length is 16 ft., find the width. 5. When it is 9.23 a. m. at New York ($74^{\circ} 0' 3''$ W.) what is the time at Chicago ($87^{\circ} 37' 30''$ W.) 6. A note of \$475 is dated April 6, 1898, with interest at $5\frac{1}{2}\%$, payable annually. What was due November 27, 1901? 7. If a horse cost \$564 and was sold at a profit of \$94, find the rate per cent of profit. 8. A rectangular lawn is 72 ft. long and 42 feet wide. How many fence posts 6 feet apart are required to fence this lawn?

GRAMMAR.

1. Explain what the subject of a sentence is. Write two sentences and point out the subject of each. 2. What is a copula verb? What is a verb phrase? 3. Write a sentence with a verb in the active voice. Change this sentence by writing the verb in the passive voice. 4. What is a direct object of a verb? An indirect object of the verb? What kind of verbs do not take objects to complete their meaning? 5. Write a list of twelve prepositions. 6. Name the personal pronouns. What are relative pronouns? 7. Write the principal parts of the following verbs: Fly, have, slay, see, and tread. 8. Conjugate the verb "teach" in the present tense, indicate mode, active and passive voice. 9-10. Name the part of speech of each word in the following sentence:

"His flaxen hair, of sunny hue,
Curled closely round his bonnet blue."

ORTHOGRAPHY.

1. Divide the following words into their proper syllables: Telegram, superintend, counterfeit, analysis, and congratulate. 2. What is accent; articulation; a diacritical mark? 3. Make and name the diacritical marks. 4. What are synonyms? Write two synonyms for each of the following words: Damp, hard, bestow, damage, and new. 5. What is the meaning of the following abbreviations:

Qt., Hund., Hon., A. M., Aug., Dr., Capt., etc. 6-10. Spell:
(1) Artillery, (2) attorney, (3) banana, (4) beauteous, (5)
cemetery, (6) chocolate, (7) caboose, (8) civilize, (9)
camphor, (10) dahlia, (11) epitaph, (12) eligible, (13) facet,
(14) genuine, (15) hallelujah, (16) inclemency, (17)
leopard, (18) machinist, (19) measles, (20) osseous, (21)
quotient, (22) recipe, (23) salable, (24) venison, (25)
whey.

Appendix No. 10.

BOXWELL-PATTERSON EXAMINATION, MAY 18, 1912.

FORENOON.

HISTORY.

1. Write a brief description of the settlement of Pennsylvania. 2. When did the Revolutionary War begin and what was the principal cause of this war? 3. How was the Constitution of the United States formed? 4. What is the substance of the first article of the Constitution? 5. Write a short description of Washington's administration. 6. What were the purposes and results of the expedition of Lewis and Clark? 7. When was gold discovered in California? What were the results of this discovery? 8. Name the Presidents of the United States that died during their term of office. 9. Name the five greatest Union leaders during the Civil War. 10. Write the names of the Presidents of the United States since Lincoln was President.

READING.

The examination in reading will be conducted by the examiners.

AFTERNOON.

GRAMMAR.

1. Use the following words in sentences: (a) as nouns, (b) as verbs: frame, fire, use, rest and studies. 2. Write the active and passive conjugation of "see" in the present tense indicative mode. 3. Write a direct question and change it to an indirect question. 4. What is the syntax of a word? Show the syntax of each word of the following sentence "It is a picture." 5. How do you classify pronouns? Name a pronoun of each class. 6. What are

adverbs? What adverbs have inflections of comparison? 7. Show by illustration, the difference between phrases and clauses. 8. What is a sentence? A word? A syllable? 9. Write three imperative sentences; also three exclamatory sentences. 10. Write a sentence containing a transitive verb and parse the verb.

WRITING.

Copy the following quotation as a specimen of your best penmanship:

The hills are dearest which our childish feet
Have climbed the earliest; and the streams most sweet
Are ever those at which our young lips drank
Stooped to their waters o'er the grassy bank.

ARITHMETIC.

1. Seventeen barrels of sugar weigh 2 T. 6 cwt. 34 lb. 8 oz. What is the weight of one barrel? 2. What will it cost at 60 cents per sq. yd. to concrete a walk 360 ft. long and 10 ft. 6 inches wide? 3. The invoice price of goods was \$288. The discount allowed by the seller was \$43.20. Find the rate of discount. 4. An agent received $3\frac{1}{4}\%$ commission for selling 90 boxes of shoes at \$12.70 per box. What was his commission? 5. A square field contains 40 A. How many rods of fence will be required to entirely enclose it? 6. The perpendicular of a right-angled triangle is 64 inches, and the hypotenuse is 82 inches. What is the length of the base? 7. If a note dated April 6, 1893, has 2 yr. 3 mo. 23 da. to run, when was it due? 8. A farmer raised 846 bu. 3 pk. 5 qt. of wheat in a field of 16 acres. How much was that per acre?

PHYSIOLOGY.

1. What are sweat glands? Why is it necessary to keep the sweat ducts open? 2. What are the ill-effects of keeping in the house or school the greater part of the time? 3. Is it necessary to be exposed to the sunlight, and pure air in order to have good health? Why? 4. How often

should baths be taken, and when should the water be warm and when cold? 5. Explain how the food enables the body to grow. 6. What is the pulmonary circulation? Why is this circulation necessary? 7. What are bacteria? Are bacteria dangerous to the health of people? 8. Explain the importance of thoroughly chewing your food. 9. What is reflex action? Give an illustration of reflex action. 10. Name the three divisions of the brain, and state the work of each division.

GEOGRAPHY.

1. What are icebergs, and how are icebergs formed? 2. What is the tide? When is the tide at flood? When at ebb? 3. Name the principal animals of South America. What are the chief animal exports of South America? 4. Name at least six large ports of Europe. What materials does England ship to the United States? 5. Name the states of the United States that are located in the wheat producing belt. 6. Name the four largest agricultural industries of Ohio. 7. Account for the names of fifteen Ohio counties. 8. Name ten of Ohio's largest cities. 9. What bodies of Water border Asia. (Name the seas, gulfs, bays and oceans.) 10. What states of the United States are touched by the Mississippi?

ORTHOGRAPHY.

1. What is a vocal, a subvocal, an aspirate? 2. Illustrate by words, the two sounds of "i" and the two sounds of "u". 3. For what do the following abbreviations stand: C. O. D., Do., J. P., P. S., and Sr.? 4. What are synonyms? Write four words and a synonym for each 5. Use the proper diacritical marks to indicate the sounds of letters in the following words: pencil, scissors, eight, there, and blue. 6-10. Spell: coupon, payable, premium, cashier, aqueduct, quinine, ceiling, peninsula, arsenal, density, descend, catarrh, strychnine, phonetic, dissension, leopard, giraffe, elixir, subtle, ideal, larceny, sulprit, cartilage, cylinder, paralyze

Appendix No. 11.

BOXWELL-PATTERSON EXAMINATION, APRIL, 1913.

ARITHMETIC.

1. What must be paid for enough 4 foot wood to fill a shed 26 ft. long, 16 ft. wide, and 12 ft. high at \$4.50 a cord?
2. A grocer sells sugar at \$5.50 per cwt. and makes a profit of 10%. How much per ton does the sugar cost him?
3. The product of two numbers is 12.46, and one of the numbers is 24.92. Find the other number.
4. If steel rails are 30 feet long, how many rails are needed for 8 miles of street railroad track?
5. Two barrels of extract of witch hazel are put up in pint bottles and sold for 20c a bottle. What is received for all of it?
6. What must be paid for the use of \$300 for 7 years, 7 months, and 7 days at $5\frac{1}{2}\%$?
7. If a man earns \$99 in 17 days, how much will he earn in $25\frac{1}{2}$ days at the same rate?
8. A farm, sold at a loss of 16%, brought \$4200. How many dollars were lost?

READING.

The examination in reading will be conducted by the examiners.

GEOGRAPHY.

1. Name and locate the six largest cities of the United States. Account for the rapid growth of the largest city of Ohio.
2. What are the four chief industries of your county? What city is the chief market for the products of your county?
3. Name five rivers of Ohio and state where each river empties its waters into a larger river or body of water.
4. What is the approximate area of the United States? Of Ohio? Of your county?
5. Name ten great sea-ports of the world. Locate each.
6. What are exports? Imports? Name four exports and four imports, and explain the necessity of commerce.
7. Name the great wheat-producing states of the United States; corn; oats; coal; hogs; wool; cotton; iron.
7. Show that you know something of the geography of South America by naming its political divisions, ten principal cities and four principal rivers.

WRITING.

Copy the following quotation as a specimen of your best penmanship: "But if one will but look for enjoyment, how much there is in every change of weather. The formation of clouds,—the various signs and signals, the uncertain wheeling and marching of the fleecy cohorts, the shades of light and gray in the broken heavens,—all have their pleasure to an observant eye. Then come the wind gust, the distant, dark cloud, the occasional fiery streak shot down through it, the run and hurry of men whose work may suffer!"—Beecher.

PHYSIOLOGY.

1. Name the special senses. Which of the special senses is the most important, and which are least important?
2. By what organs of the body is the blood purified? What part of the weight of the body is blood?
3. State several uses of the hair and nails, and explain why the hair and nails should have care.
4. How many teeth are there in the temporary set? In the permanent set? Name the teeth of the permanent set.
5. What is the value of perspiration? What is the normal temperature of the body?
6. Show that you understand the construction of the eye by locating each of the following parts: Cornea, pupil, iris, ciliary muscle, choroid, sclerotic, retina, and crystalline lens.
7. Name and locate all the bones of the face and skull.
8. Name the three divisions of the brain. Which is the largest division of the brain?

HISTORY.

1. What was the Lewis and Clark Expedition? Relate the story of this expedition, stating the time and purpose of the adventure.
2. Who was the first president of the United States?
3. What were several of the causes of the Revolutionary War? Name three of the leading Americans that took part in this war.
4. When and from whom did the United States purchase Alaska? Louisiana? Florida? How much was paid for each?
5. What were the provisions of the Compromise of 1850? Who intro-

duced this bill? 6. Name the presidents of the United States that have served two entire terms. 7. What are the qualifications specified by the Constitution for the United States Senators? For representatives of Congress? 8. Name the presidents of the United States since Grover Cleveland.

GRAMMAR.

"The hills are dearest which our childish feet
Have climbed the earliest, and the streams most sweet
Are ever those at which our young lips drank—
Stoop'd to their waters o'er the grassy bank."

1. Point out all the nouns of the quotation and state how each noun is used in the sentence. 2. Point out all the verbs of the quotation given above and state the use and form of each. 3. Name the tenses of the indicative mode. Write a form of the verb "teach" in each tense of the indicative mode, active and passive. 4. What are coordinate conjunctions? Subordinate conjunctions? Write, in sentences, illustrations of each. 5. What are relative pronouns? Name them. 6. Name all of the auxiliary verbs. Conjugate an auxiliary verb in the present tense of the indicative mode. 7-8. Write at least one hundred words on any one of the following subjects: "The Study of Agriculture." "My Plans for the Future." "The Value of My School Training." (This composition should show a good choice of words, correct capitalization and punctuation.)

ORTHOGRAPHY.

1. Write six rules for capital letters. 2. Define a vowel, a consonant, a letter, a syllable, a diphthong, a digraph, a trigraph. 3. Write synonyms for the following words: confers, faultless, inform, pause, sense, and uphold. 4. Illustrate by words, six sounds of a, using the proper diacritical marks. 5-10. Spell: Weevil, alpaca, doily, lapel, pacify, satellite, ecstasy, separate, eyeing, heron, sibilant, audible, glycerine, fallacy, inertia, vitiate, peony, dahlia, schedule, secession, precedent, iambus, prosody, gelatin, atheist, pithy, fallible, aliquot, digit, amethyst.

Appendix No. 12.

BOXWELL-PATTERSON EXAMINATION, MAY, 1913.

ARITHMETIC.

1. If a 10-inch by 16-inch slate is exposed 4 inches to the weather, find the number of slates necessary to lay a square (10 ft. by 10 ft.). 2. If a family use $\frac{3}{4}$ pt. kerosene each day on the average, how long will 5 gallons last them? 3. At \$5.80 per ton what will be the cost of a cargo consisting of 48,625 pounds of salt? 4. John Adams bought 72 yards of cloth at \$8 per yard and sold it at a gain of \$158.40. Find the rate per cent. of gain. 5. If 6 men in 18 days of 10 hours each, earn \$220, how much can 9 men earn in 24 days of 9 hours each? 6. If a single fare to the city is 60c, what per cent. do I save by buying 100 tickets for \$50? 7. A farm 160 rods long and 120 rods wide is sold in two pieces, $\frac{3}{8}$ of it at \$60 per acre, and the remainder at \$50 an acre. Find the amount of the entire sale. 8. A path leading to the top of a hill has a rise of 9 inches in 90 feet. What is the elevation of the hill in feet, if the path is $\frac{3}{4}$ of a mile long?

READING.

The examination in reading will be conducted by the examiners.

WRITING.

Copy the following quotation as a specimen of your best penmanship:

To the Dandelion.

Dear common flower, that grow'st beside the way,
Fringing the dusty road with harmless gold,
First pledge of blithesome May,
Which children pluck, and, full of pride, uphold,
High-hearted buccaneers, o'erjoyed that they
An Eldorado in the grass have found,
Which not the rich earth's ample round
May match in wealth, thou art more dear to me
Than all the prouder summer blooms may be.

—Lowell.

GRAMMAR.

1. Write three sentences and point out the subject and the predicate of each sentence. 2. What are complex sentences? What are compound sentences? Write two complex and two compound sentences. 3. What is a clause? A phrase? Write a sentence containing (a) an adjective clause; (b) a noun clause; (c) an adverbial clause. 4. Write the comparison of the following adjectives: difficult, worthy, bright, fine, and muddy. 5. Name the parts of speech of the words in bold face of the following sentence: "I seem to have been **only like** a boy **playing** on the sea-shore, and **diverting** myself in **now** and then finding a **smoother** pebble or a prettier shell **than ordinary**, whilst the great ocean of truth lay **all** undiscovered before **me**." Choose four verbs from the sentence given above and give the mode and tense of each. 7. Write all the participles of teach, see, and write. 8. How do you classify the pronouns? Name one pronoun of each class.

PHYSIOLOGY.

1. What have you learned by the study of physiology that has been a definite help to you? 2. What are motor and sensory nerves? What is reflex action? Give an illustration of reflex action. 3. What proof have you that tobacco and alcoholic drinks are harmful to the people that use them? (In answering this question, tell all you know of the harmful effects of tobacco and alcohol.) 4. What are cranial nerves? Name two pairs of cranial nerves. 5. Compare arteries and veins as to structure, location, and color of the blood. 6. What is synovial membrane? What are ligaments? Joints? 7. Name all the organs of digestion, and state briefly what part each organ does in the work of digestion. 8. What should be done to relieve the pain of a burn or scald? Of frost bites? Explain artificial respiration.

UNITED STATES HISTORY.

1. Relate briefly, the story of the discovery of America by Christopher Columbus. 2. Name the thirteen original Colonies. What were the principal hardships the Colonists were forced to endure? 3. Who was General Braddock? Where and by whom was Braddock defeated? 4. What is a protective tariff? What is a tariff for revenue? What do you understand by the conservation of our natural resources? 5. Who was Henry Clay? What part did Henry Clay take in constructing and passing anti-slavery laws? What is the Constitution of the United States? Explain one provision or section of the Constitution of the United States. 7. What were the causes of the war between Spain and the United States? Who was President of the United States during this war? 8. Who is President of the United States? Vice-President?

GEOGRAPHY.

1. Name the five largest cities of Ohio, largest first, and locate each by naming the county in which the city is located. 2. Name three great railroad systems that have railroads in Ohio. Three express companies operating in Ohio. 3. How many states are there in the United States? Which state is the largest? Which is the smallest? 4. Name the four largest rivers of South America. What is the capital of Brazil? Peru? Chili? Equador? Bolivia? 5. Name two great coal-producing states of the United States. Two great wool-producing states. Two great apple-producing states. 6. Name and locate three great mountain systems of Europe. Name and locate two great mountain systems of Asia. 7. What is the latitude and longitude of your home. (This question should be answered within at least five degrees.) 8. Draw a map of Ohio, locating the Maumee, Scioto, Miami and Muskingum rivers, Columbus, Toledo, Marietta and Dayton.

ORTHOGRAPHY.

1. Write at least two synonyms of each of the following words: affect, adjourn, coarse, crave, issue, and design.
2. What are derivative words? Illustrate by three examples.
3. Write five words, each of which has at least one silent consonant.
4. What are prefixes? Suffixes? Affixes? Illustrate each by an example.
- 5-10. Spell: luxury, righteous, fakir, avarice, vicious, vacuum, icicle, privilege, nephew, oasis, parallel, deficit, catarrh, vaccinate, restaurant, biscuit, reindeer, reprieve, souvenir, calendar, spinach, dandelion, daffodil, catalpa, soliloquy, lyceum, forfeit, trivial, limekiln, fuchsia.

Provisions of the Boxwell-Patterson Law.

The full provisions are found in Sections 7746 to 7752 inclusive. Teachers should have a copy of the Ohio School Laws on their desks at all times. A copy may be obtained free by applying to the County Auditor.

The Boxwell-Patterson Examinations are held only on the third Saturday of April and the third Saturday of May. The examinations are held by the county examiners, and usually at the county seat. The questions are prepared in the office of the State School Commissioner at Columbus. This book contains all the questions that have ever been used under this law. The branches are indicated by the lists published in this book. Pupils taking the examination must make a minimum grade of 50% and an average of 70% in order to pass. No age is specified in the law.

Commencements.—The township board must provide for a township commencement for all successful applicants from the township and the pupil must there deliver an oration, or declamation, or read an essay. The county examiners must provide a county commencement for all who comply with the law in the township commencement, and the examiners also must issue diplomas to all entitled to them.

Admission to High School.—These diplomas admit the holders to a first-grade high school, and the pupil is entitled to have his or her tuition paid for four years in a first-grade school if the township or special district in which the pupil lives does not maintain a high school. If the township or special district maintains a second-grade high school the board shall pay the pupil's tuition for one year to a first-grade school; if it maintains a third-grade high school, the pupil is entitled to tuition for two years in a first-grade school. See Sections 7747, 7748, 7749, 7750, and 7751.

NOTICE—THE OHIO TEACHER, published at Columbus, Ohio, explains fully many things of interest to pupils and teachers. Send for a sample copy if you have not seen it.

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